2 of 10

| 278 | HWEAC64 | 784039 | 288 | 129 - 551 | 1693 | Met-1 to Thr-7, Glu-13 to Val-18, Val-25 to Asn-34, Gly-56 to Val-63, Gln-80 to Glu-89, | Gly-351 to Gly-358, Lys-364 to Asn-371, Ser-374 to Gln-385, Glu-407 to Glu-413, Tyr-419 to Ser-424, Arg-435 to Gln-444. | 2, L0471: 2, H0373: 2, H0068: 2, H0509: 2, H0519: 2, H0435: 2, S0152: 2, L0754: 2, L0603: 2, S0192: 2, H0170: 1, H0657: 1, S0212: 1, H0638: 1, S0354: 1, H0580: 1, S0045: 1, H0431: 1, H0333: 1, T0039: 1, H0013: 1, H0575: 1, S0049: 1, H0687: 1, S0003: 1, H0032: 1, S0364: 1, H0040: 1, H0551: 1, T0067: 1, H0268: 1, H0413: 1, T0069: 1, T0042: 1, S0150: 1, H0652: 1, H0529: 1, L0649: 1, L0803: 1, S0374: 1, H0691: 1, H0660: 1, H0672: 1, S0350: 1, H0478: 1, S0027: 1, S0028: 1, L0439: 1, L0740: 1, L0750: 1, L0755: 1, L0757: 1, L0759: 1, S0031: 1, L0591: 1, L0593: 1, S0026: 1, S0194: 1, S0196: 1 and S0424: 1. | AR104: 1, AR033: 1, AR089: 1, AR053: 0, AR096: 0, AR061: 0, AR039: 0, AR052: 0, AR060: 0, AR055: 0 | 32-57 |

| 279 | HSDFQ43 | 784159 | 289 | 14 - 433 | 1694 | Met-1 to Arg-15. | AR104: 33, AR033: 30, AR060: 17, AR039: 15, AR096: 14, AR089: 14, AR053: 12, AR052: 10, AR055: 9, AR061: 5 S0422: 20, S0408: 10, L0776: 8, S0444: 7, H0038: 7, S0358: 6, L0740: 6, L0754: 6, L0758: 6, S0440: 5, L0771: 5, S0374: 5, L0756: 5, L0757: 5, L0774: 4, L0519: 4, H0547: 4, H0660: 4, L0748: 4, L0750: 4, L0752: 4, S0436: 4, S6024: 3, S0212: 3, S0442: 3, S0354: 3, S0360: 3, H0733: 3, T0115: 3, H0327: 3, S0003: 3, T0042: 3, | Lys-102 to Leu-111, Gln-114 to Gln-119. | H0694: 29, H0703: 13, H0683: 10, H0717: 7, H0713: 6, H0542: 6, H0687: 4, H0656: 3, H0685: 2, H0716: 2, H0688: 2, H0695: 2, S0428: 2, H0689: 2, H0684: 2, H0521: 2, H0580: 1, H0601: 1, H0592: 1, H0708: 1, S0150: 1, H0699: 1, H0519: 1, H0709: 1, H0522: 1, H0555: 1, S0028: 1, H0707: 1 and H0543: 1. | 79-99, 118-134 |

H0494: 3, L0770: 3, L0775: 3, L0663: 3, H0144: 3, L0438: 3, S0406: 3, L0744: 3, L0439: 3, L0731: 3, H0661: 2, S0356: 2, H0728: 2, S0476: 2, H0619: 2, H0393: 2, S0222: 2, H0431: 2, H0587: 2, H0156: 2, H0098: 2, H0318: 2, S0474: 2, L0471: 2, H0014: 2, H0373: 2, S0022: 2, H0622: 2, H0313: 2, H0090: 2, H0551: 2, L0564: 2, S0438: 2, L0761: 2, L0662: 2, L0766: 2, L0659: 2, H0539: 2, H0521: 2, L0747: 2, S0031: 2, S0434: 2, L0592: 2, L0485: 2, L0581: 2, L0604: 2, S0026: 2, H0136: 2, H0542: 2, H0423: 2, H0624: 1, H0686: 1, H0713: 1, S0114: 1, H0662: 1, H0638: 1, S0420: 1, S0376: 1, H0729: 1, H0730: 1, H0722: 1, S0007: 1, S0046: 1, H0411: 1, S0278: 1, H0441: 1, H0461: 1, H0333: 1, H0574: 1, H0632: 1, L0622: 1, T0040: 1, T0060: 1, L0021: 1, H0147: 1,

H0036: 1, S0010: 1, S0346: 1, T0048: 1, H0421: 1, S0049: 1, T0110: 1, H0050: 1, S0050: 1, H0015: 1, H0051: 1, H0375: 1, S6028: 1, S0214: 1, H0328: 1, H0428: 1, H0039: 1, H0119: 1, H0031: 1, H0553: 1, H0032: 1, H0383: 1, H0316: 1, H0040: 1, T0067: 1, H0264: 1, H0413: 1, H0056: 1, H0560: 1, H0359: 1, S0144: 1, S0210: 1, L0520: 1, L0769: 1, L0638: 1, L0764: 1, L0773: 1, L0768: 1, L0387: 1, L0649: 1, L0389: 1, L0803: 1, L0805: 1, L0653: 1, L0655: 1, L0636: 1, L0517: 1, L0518: 1, L0809: 1, L0664: 1, L0665: 1, H0724: 1, H0520: 1, H0593: 1, S0126: 1, H0689: 1, H0711: 1, H0683: 1, S0330: 1, H0518: 1, S0152: 1, H0696: 1, S0044: 1, H0478: 1, H0626: 1, H0627: 1, S0390: 1, S0037: 1, L0786: 1, S0260: 1, H0445: 1, H0343: 1, H0595: 1, L0590: 1, H0667: 1,

							H0216: 1, H0422: 1, S0424: 1 and H0506: 1.	
280	HMHBN86	784650	290	45 - 464	1695	Ser-16 to Asp-23.	AR053: 38, AR096: 29, AR052: 27, AR039: 25, AR089: 12, AR055: 11, AR060: 10, AR104: 9, AR033: 8, AR061: 5, L0662: 2, L0751: 2, L0591: 2, H0265: 1, S0358: 1, H0331: 1, H0486: 1, H0286: 1, H0644: 1, H0090: 1, H0100: 1, S0142: 1, L0638: 1, L0648: 1, L0666: 1, L0748: 1 and S0398: 1.	83-104, 106-122, 31-52, 58-74
281	HLTAZ78	784764	291	123 - 1055	1696	Asp-25 to Glu-47, Thr-88 to Gln-99, Tyr-129 to Ser-135, Glu-143 to Ile-150, Pro-216 to Asp-221, Lys-287 to Ser-293.	AR104: 52, AR061: 49, AR060: 41, AR055: 34, AR033: 30, AR089: 29, AR052: 21, AR039: 20, AR053: 19, AR096: 15, L0731: 9, L0794: 8, L0749: 6, L0439: 5, L0662: 4, L0770: 3, L0803: 3, L0596: 3, L0717: 2, H0591: 2, L0761: 2, L0766: 2, L0659: 2, L0809: 2, L0663: 2, H0436: 2, L0748: 2, L0747: 2, L0779: 2, L0755: 2, L0758: 2, L0759: 2, L0591: 2, L0581: 2, H0423:	185-204, 101-117

203

282	HLDBM50	784930	292	1326 - 655	1697		
						2, H0170: 1, S0282: 1, H0661: 1, H0662: 1, H0638: 1, S0418: 1, S0356: 1, S0360: 1, S0046: 1, H0393: 1, H0486: 1, H0147: 1, H0318: 1, L0041: 1, H0562: 1, H0049: 1, H0266: 1, H0124: 1, H0598: 1, H0090: 1, L0475: 1, H0561: 1, S0382: 1, S0440: 1, H0509: 1, H0641: 1, S0002: 1, S0426: 1, L0769: 1, L0764: 1, L0804: 1, L0650: 1, L0805: 1, L0776: 1, L0789: 1, L0665: 1, H0520: 1, H0519: 1, H0666: 1, S0146: 1, S33014: 1, L0754: 1, L0757: 1, L0608: 1, S0026: 1, S0192: 1 and H0542: 1.	
						AR061: 134, AR039: 81, AR096: 49, AR053: 35, AR104: 34, AR033: 32, AR060: 31, AR089: 30, AR052: 28, AR055: 18, L0766: 5, L0637: 2, L0748: 2, L0777: 2, H0170: 1, S0346: 1, H0560: 1, H0509: 1, S0002: 1, L0764: 1, L0804: 1, L0775: 1, L0789: 1, L0666: 1, S0380:	10-37, 185-214, 39-63, 117-134

204

| 283 | HHEDH33 | 785013 | 293 | 104 - 415 | 1698 | Thr-10 to Asp-20, Ser-50 to Asn-55, Ala-71 to Asp-77. | 1, H0521: 1, L0779: 1 and L0755: 1. AR039: 9, AR033: 8, AR104: 8, AR053: 6, AR096: 6, AR089: 6, AR052: 5, AR055: 5, AR060: 4, AR061: 2 L0521: 26, S0422: 22, H0170: 16, H0144: 16, L0748: 12, H0083: 11, H0624: 8, L0747: 7, H0171: 6, L0750: 6, T0042: 5, L0803: 5, L0749: 5, H0543: 5, H0581: 4, L0794: 4, L0529: 4, S0134: 3, H0486: 3, L0586: 3, H0013: 3, T0041: 3, L0517: 3, H0659: 3, L0777: 3, L0755: 3, L0589: 3, L0599: 3, H0542: 3, H0329: 2, H0645: 2, H0393: 2, H0427: 2, H0052: 2, H0530: 2, S0036: 2, H0591: 2, H0063: 2, L0598: 2, L0637: 2, L0662: 2, L0804: 2, L0655: 2, H0519: 2, L0740: 2, L0752: 2, L0759: 2, H0583: 1, S0282: 1, H0306: 1, H0402: 1, H0489: 1, H0580: 1, H0151: 1, H0370: 1, H0392: 1, | Xq13.3-Xq21.2 | 303100, 305450, 309605, 314580 | 77-94 |

#	Name		SEQ	Range	SEQ		Clones		Mutation
284	HAIDL86	785497	294	139 - 462	1699	Ile-42 to Gln-52.	H0497: 1, S0280: 1, S0010: 1, S0346: 1, L0105: 1, H0421: 1, H0009: 1, H0569: 1, H0050: 1, H0620: 1, H0354: 1, H0252: 1, H0328: 1, H0428: 1, H0090: 1, H0100: 1, H0202: 1, H0494: 1, UNKWN: 1, H0529: 1, L0520: 1, L0770: 1, L0774: 1, L0555: 1, L0606: 1, L0657: 1, L0659: 1, L0809: 1, L0544: 1, H0520: 1, H0547: 1, H0436: 1, H0576: 1, L0743: 1, L0744: 1, L0754: 1, L0786: 1, L0731: 1, L0758: 1, S0031: 1, H0595: 1, S0106: 1 and S0452: 1.	AR053: 28, AR033: 20, AR052: 17, AR089: 12, AR096: 10, AR104: 10, AR060: 7, AR039: 5, AR055: 4, AR061: 4, H0171: 1, S0132: 1, H0528: 1 and L0592: 1.	1-26, 53-75, 83-99
285	HTEPF14	785958	295	61 - 588	1700	Ser-12 to Gln-19.		AR055: 8, AR060: 5, AR052: 4, AR033: 4, AR061: 4, AR053: 4, AR096: 3, AR089: 3,	142-160

206

286	HOEDD04	786659	296	363 - 803	1701	Val-78 to Asp-85.	AR052: 14, AR053: 8, AR055: 8, AR089: 8, AR096: 7, AR033: 7, AR060: 7, AR039: 5, AR061: 5, AR104: 4 S0126: 2, S04474: 1 and S0003: 1.	AR104: 3, AR039: 2 L0758: 2, S0134: 1, H0618: 1, H0038: 1 and H0616: 1.	85-104
287	HODBK89	786830	297	150 - 449	1702	Leu-28 to Arg-38.	AR033: 57, AR089: 44, AR052: 41, AR053: 38, AR096: 35, AR104: 30, AR060: 27, AR039: 16, AR055: 16, AR061: 8 S0358: 8, L0766: 7, L0777: 7, L0731: 7, L0803: 4, L0659: 4, L0748: 4, L0751: 4, S0250: 3, L0775: 3, L0783: 3, L0809: 3, L0663: 3, H0305: 2, S0418: 2, S0360: 2, S0010: 2, L0763: 2, L0789: 2, H0520: 2, S3012: 2, L0750: 2, L0752: 2, L0755: 2, L0599: 2, L0362: 2, S0242: 2, H0717: 1, H0583: 1, H0656: 1, S0212: 1, S0420: 1,		47-73

| 288 | HMUAZ89 | 786878 | 298 | 182 - 529 | 1703 | Met-1 to Ile-11, Asn-16 to Gly-33. | S0376: 1, H0208: 1, S6026: 1, H0574: 1, H0632: 1, S0414: 1, H0559: 1, H0486: 1, H0013: 1, H0575: 1, S0474: 1, H0581: 1, H0570: 1, H0024: 1, H0014: 1, H0355: 1, H0328: 1, T0023: 1, H0553: 1, H0090: 1, H0591: 1, H0551: 1, H0488: 1, H0268: 1, H0623: 1, S0015: 1, H0509: 1, S0422: 1, H0529: 1, L0520: 1, L0761: 1, L0372: 1, L0626: 1, L0804: 1, L0650: 1, L0774: 1, L0653: 1, L0793: 1, L0666: 1, L0665: 1, H0547: 1, S0126: 1, H0684: 1, H0648: 1, S0152: 1, H0521: 1, S0406: 1, S0390: 1, L0745: 1, L0749: 1, L0756: 1, L0758: 1, L0588: 1, S0194: 1, H0543: 1, H0423: 1 and S0384: 1. AR089: 1, AR033: 1, AR061: 0, AR104: 0, AR096: 0, AR055: 0, AR039: 0, AR060: 0, AR052: 0 L0740: 6, S0212: 3, H0265: 2, H0656: 2, H0581: 2 | 85-101, 41-57, 66-82 |

289	HSBBB92	787263	299	221 - 1144	1704	Arg-64 to His-70.	2, H0038: 2, H0529: 2, L0649: 2, S0027: 2, L0754: 2, L0777: 2, L0731: 2, L0599: 2, S0192: 2, S0134: 1, H0341: 1, H0663: 1, S0418: 1, S0045: 1, H0619: 1, H0497: 1, H0486: 1, L0471: 1, H0615: 1, H0553: 1, H0040: 1, H0551: 1, L0662: 1, L0766: 1, L0803: 1, L0654: 1, L0658: 1, H0435: 1, H0660: 1, S0390: 1, S3014: 1, S0206: 1, L0750: 1, L0752: 1, S0194: 1 and H0506: 1.			282-308
290	HHBGJ75	787450	300	21 - 416	1705	Asp-26 to Arg-32.	AR104: 32, AR033: 24, AR096: 24, AR052: 23, AR053: 22, AR055: 20, AR039: 17, AR089: 15, AR060: 13, AR061: 9 L0758: 7, L0779: 5, H0038: 4, H0616: 2, L0151: 2, L0766: 2, H0125: 1, T0040: 1, H0050: 1, H0144: 1, H0698: 1, L0438: 1, H0521: 1, L0777: 1, L0752: 1, L0759: 1 and S0260: 1.	Xp11.23	300047, 300071,	63-89, 48-64

300110,
300600,
301000,
301000,
301830,
309470,
309500,
309610,
309850,
311050,
312060

AR052: 23, AR055: 21,
AR096: 20, AR104: 20,
AR060: 15, AR061: 12
L0741: 7, H0545: 6,
L0770: 6, L0758: 5, S0045:
3, L0769: 3, L0794: 3,
L0766: 3, L0805: 3, L0809:
3, H0689: 3, L0777: 3,
L0592: 3, S0360: 2, H0156:
2, S0010: 2, H0009: 2,
S0022: 2, H0135: 2, H0100:
2, H0538: 2, S0126: 2,
L0759: 2, L0596: 2, L0588:
2, L0589: 2, S0040: 1,
S0212: 1, H0484: 1, H0483:
1, H0255: 1, H0662: 1,
S0442: 1, S0046: 1, H0351:
1, H0441: 1, H0431: 1,
H0486: 1, H0052: 1, H0309:
1, H0546: 1, H0566: 1,
L0471: 1, H0373: 1, S0388:
1, S0051: 1, H0083: 1,
H0354: 1, H0594: 1, H0266:
1, H0288: 1, H0328: 1,
H0615: 1, H0428: 1, H0030:
1, H0031: 1, H0628: 1,
H0124: 1, S0036: 1, H0551:
1, T0004: 1, S0210: 1,
L0369: 1, L0768: 1, L0803:
1, L0650: 1, L0776: 1,

#	Clone	Acc.	SEQ NT	Range	SEQ AA	Features	Library	Positions
291	HDPRY22	787466	301	78 - 608	1706	Lys-26 to Glu-32, Leu-36 to Thr-43, Ala-64 to Trp-70.	L0518: 1, L0791: 1, H0682: 1, H0539: 1, S0044: 1, H0436: 1, S3012: 1, S0027: 1, L0740: 1, L0754: 1, L0747: 1, L0756: 1, L0780: 1, S0031: 1, L0599: 1, H0665: 1, S0192: 1, H0543: 1 and H0423: 1.	91-121, 77-93
292	HBBBC20	787587	302	570 - 1073	1707		AR053: 1, AR055: 1, AR089: 1, AR033: 1, AR061: 0, AR096: 0, AR039: 0, AR104: 0, AR052: 0, AR060: 0, H0543: 2, H0656: 1, H0341: 1, S0045: 1, H0039: 1, S0210: 1 and H0521: 1. AR096: 8, AR033: 7, AR053: 6, AR060: 5, AR089: 5, AR052: 5, AR039: 3, AR055: 2, AR061: 2, AR104: 1, S0007: 2, T0040: 1, S0010: 1, H0374: 1, L0157: 1, H0488: 1, H0519: 1 and H0539: 1.	80-97, 132-148, 111-127
293	HMELW08	788955	303	105 - 1220	1708	Tyr-21 to Lys-28, Asp-51 to Asn-61, Asp-83 to Val-98, Phe-157 to Gln-165,	AR055: 10, AR096: 6, AR060: 6, AR033: 6, AR052: 5, AR089: 5, AR061: 4, AR053: 4,	248-264, 114-130

294	HTPDL90	789115	304	150 - 1235	1709	Asn-198 to Asn-205, Arg-241 to Gly-247, Thr-266 to Leu-272, Gln-288 to Lys-299, Pro-348 to Gly-354.	AR104: 3, AR039: 3, L0439: 4, H0553: 3, S0414: 2, H0031: 2, H0625: 2, H0529: 2, H0144: 2, S0126: 2, L0742: 2, L0744: 2, L0779: 2, H0717: 1, H0656: 1, S0222: 1, H0333: 1, H0013: 1, S0010: 1, T0110: 1, H0050: 1, T0010: 1, S6028: 1, H0266: 1, S0318: 1, S0316: 1, S0003: 1, H0428: 1, H0551: 1, H0100: 1, T0042: 1, S0344: 1, H0538: 1, L0766: 1, L0805: 1, L0665: 1, H0519: 1, H0690: 1, H0670: 1, S0380: 1, L0743: 1, L0756: 1, L0731: 1, S0026: 1, S0192: 1, S0276: 1, H0423: 1 and L0698: 1.	AR039: 69, AR096: 52, AR089: 45, AR052: 34, AR053: 32, AR060: 21, AR055: 15, AR104: 13, AR033: 12, AR061: 8	190-207, 14-30, 288-304, 144-160
295	HTACZ08	789276	305	1095 - 82	1710	Pro-15 to Gly-23, Glu-59 to Ser-64, Leu-100 to Gln-106,		AR055: 11, AR061: 6, AR060: 6, AR033: 5, AR089: 4, AR052: 4,	161-177, 276-292

296	HAGBC91	789377	306	48 - 377	1711		
						Arg-134 to Glu-139, Met-219 to Trp-225, Ile-255 to Asp-260.	AR096: 3, AR104: 3, AR053: 3, AR039: 2, L0766: 4, L0749: 4, L0804: 3, L0751: 3, H0486: 2, H0069: 2, H0012: 2, H0620: 2, H0634: 2, H0616: 2, L0771: 2, H0521: 2, L0747: 2, H0583: 1, S0212: 1, H0255: 1, S0356: 1, S0376: 1, H0619: 1, H0609: 1, H0613: 1, H0586: 1, H0618: 1, H0373: 1, H0239: 1, H0213: 1, H0038: 1, H0040: 1, H0087: 1, S0426: 1, L0763: 1, L0769: 1, L0761: 1, L0646: 1, L0803: 1, L0774: 1, L0775: 1, L0651: 1, L0526: 1, L0790: 1, L0666: 1, L0665: 1, S0126: 1, H0539: 1, S0406: 1, L0750: 1, L0756: 1, L0779: 1, L0757: 1, L0758: 1 and S0194: 1.
							AR096: 18, AR039: 18, AR089: 16, AR060: 12, AR104: 11, AR053: 10, AR052: 10, AR033: 9, AR055: 9, AR061: 5, S0114: 2, S0360: 1, H0619: 1, S0222: 1, H0392:
							52-72, 31-50, 75-95, 9-28

297	HTTCB23	789555	307	1698 - 10	1712			451-468, 2-18, 474-490, 306-322
						Trp-105 to Thr-116, Trp-155 to Gln-162, Gln-172 to Asp-177, Gln-226 to Glu-232, Gln-254 to Glu-260, Glu-296 to Tyr-305, Thr-338 to Val-344, Leu-377 to Ile-384, Asp-413 to Lys-419, Cys-436 to Ile-443, Thr-490 to Gln-496, Glu-508 to Ser-514, Lys-525 to Glu-537.	AR039: 45, AR096: 22, AR104: 20, AR033: 19, AR053: 18, AR089: 16, AR055: 15, AR060: 14, AR052: 13, AR061: 8 L0666: 5, L0748: 5, L0747: 4, L0768: 3, H0521: 3, L0750: 3, L0755: 3, L0608: 3, H0486: 2, H0575: 2, H0052: 2, H0457: 2, H0024: 2, H0090: 2, L0631: 2, L0766: 2, L0665: 2, L0438: 2, H0547: 2, H0435: 2, H0658: 2, H0696: 2, H0436: 2, H0170: 1, H0650: 1, H0656: 1, H0638: 1, S0420: 1, H0607: 1, H0013: 1, H0618: 1, H0046: 1, S0250: 1, S0003: 1, H0688: 1, T0023: 1, S0364: 1, H0591: 1, H0040: 1, H0264: 1, H0268: 1, H0494: 1, H0509: 1, H0538: 1, H0529: 1, L0763: 1, L0644: 1, L0662: 1, L0775: 1, L0659: 1, L0783: 1, L0809: 1, 1, S0010: 1, H0538: 1, L0527: 1, L0657: 1, L0659: 1, H0435: 1, H0658: 1, H0543: 1 and L0600: 1.	

#								
298	HYAAL21	789607	308	99 - 1217	1713		L0789: 1, L0664: 1, H0519: 1, H0648: 1, S0378: 1, S0380: 1, H0522: 1, L0779: 1, L0759: 1, H0543: 1 and H0423: 1. AR039: 33, AR089: 18, AR053: 17, AR096: 17, AR033: 14, AR052: 14, AR104: 13, AR060: 11, AR055: 7, AR061: 5 H0583: 1 and S0216: 1.	82-98
299	HTLHY91	789660	309	121 - 576	1714		AR055: 3, AR061: 3, AR033: 3, AR096: 3, AR060: 2, AR089: 2, AR052: 1, AR053: 1, AR039: 1, AR104: 0 H0618: 3, H0253: 3, L0803: 2, L0748: 2, L0779: 2, L0758: 2, H0550: 1, T0060: 1, H0544: 1, H0041: 1, S0368: 1, H0038: 1, H0509: 1, L0363: 1, L0768: 1, L0657: 1, L0809: 1, L0663: 1, H0684: 1 and S0152: 1.	116-134
300	HUTAD91	789688	310	4 - 513	1715	Gly-42 to Gly-47, Asn-64 to Asn-74, Ser-102 to Val-108, Pro-114 to Leu-121.	AR055: 20, AR052: 18, AR033: 17, AR104: 16, AR039: 15, AR053: 14, AR060: 13, AR096: 9,	84-100

215

							AR089: 8, AR061: 3 L0731: 6, L0770: 3, H0295: 2, L0375: 2, L0756: 2, H0706: 1, H0212: 1, S0440: 1, L0369: 1, L0763: 1, L0769: 1, L0639: 1, L0646: 1, L0764: 1, L0774: 1, L0805: 1, L0542: 1, L0783: 1, L0666: 1, L0664: 1, L0565: 1, H0648: 1, S0027: 1, L0740: 1, L0745: 1, L0749: 1, L0750: 1, L0752: 1, L0599: 1 and H0423: 1.	
301	HKGDE58	790091	311	28 - 531	1716	Pro-5 to Lys-16, Ser-21 to Leu-26, Trp-43 to Cys-53, Glu-74 to Pro-81, Met-86 to Val-91.	AR096: 3, AR089: 2, AR060: 2, AR104: 2, AR053: 2, AR055: 2, AR033: 1, AR052: 1, AR061: 1, AR039: 0 H0538: 1, L0803: 1 and L0731: 1.	114-130
302	HBIAW78	790219	312	50 - 1051	1717	Asp-41 to Asn-47, Ser-57 to Lys-63, Glu-91 to Gly-98, Asp-108 to Cys-117, Lys-177 to Glu-187, Phe-204 to Asp-221.	AR033: 7, AR096: 5, AR052: 4, AR060: 4, AR061: 3, AR089: 3, AR055: 3, AR053: 2, AR104: 2, AR039: 1 H0521: 4, H0656: 3, H0542: 2, L0615: 1, S0045: 1, H0643: 1, H0013: 1,	235-252, 133-149

303	HTOIC11	790634	313	89 - 853	1718	H0575: 1, H0581: 1, H0421: 1, S0049: 1, H0052: 1, T0103: 1, H0050: 1, H0373: 1, H0051: 1, H0083: 1, H0375: 1, H0266: 1, H0039: 1, H0031: 1, H0644: 1, H0090: 1, H0591: 1, H0038: 1, H0412: 1, H0623: 1, H0494: 1, S0150: 1, S0344: 1, S0210: 1, S0422: 1, H0519: 1, H0522: 1, S3012: 1, L0588: 1 and L0591: 1.	AR033: 5, AR089: 4, AR061: 3, AR060: 2, AR052: 2, AR055: 2, AR053: 2, AR039: 1, AR096: 0, AR104: 0 L0794: 4, L0766: 2, L0777: 2, H0549: 1, H0093: 1, H0135: 1, H0087: 1, H0264: 1, L0769: 1, L0804: 1, L0774: 1, L0783: 1, L0809: 1, L0787: 1, L0789: 1 and L0666: 1.			50-73, 167-183
304	HNTRM40	790790	314	141 - 446	1719	Phe-6 to Leu-14, Lys-30 to Asp-37.	AR039: 4, AR096: 3, AR089: 3, AR104: 3, AR033: 2, AR060: 2, AR055: 2, AR052: 2, AR061: 2, AR053: 2	1p31	180069, 180069, 180069, 201450, 248610,	74-90, 12-28

217

| 305 | HSKAY30 | 790807 | 315 | 707 - 1645 | 1720 | Pro-98 to Phe-110, Ser-114 to Asp-123, Lys-152 to Arg-157, Arg-235 to Gln-250. | L0770: 4, H0551: 2, L0805: 2, H0593: 2, H0658: 2, L0439: 2, L0747: 2, H0431: 1, H0156: 1, H0251: 1, H0135: 1, L0776: 1, L0537: 1, L0790: 1, H0144: 1, L0352: 1, H0547: 1, S0037: 1, S0206: 1, L0755: 1 and L0758: 1.
AR055: 7, AR096: 5, AR060: 4, AR052: 4, AR089: 3, AR033: 3, AR061: 3, AR053: 2, AR104: 2, AR039: 1
L0527: 2, H0208: 1, H0635: 1, S0250: 1, H0622: 1, H0644: 1, H0551: 1, L0766: 1, H0519: 1, H0521: 1, S0027: 1 and H0136: 1. | 600309, 601676, 602522 | |
| 306 | HSSJN12 | 791489 | 316 | 149 - 505 | 1721 | Gly-33 to Arg-38. | AR055: 14, AR033: 11, AR053: 11, AR089: 10, AR052: 9, AR096: 8, AR039: 8, AR060: 8, AR061: 7, AR104: 7
H0620: 7, L0731: 6, L0751: 4, H0599: 3, L0157: 3, H0135: 3, L0747: 3, L0779: 3, S0222: 2, H0333: 2, H0012: 2, H0188: 2, | 160-188, 20-47, 200-223, 57-84, 132-150, 2-18 | 95-113, 38-54 |

307	HTFBG93	791501	317	136 - 483	1722	Ser-16 to Gly-22.	H0213: 2, H0553: 2, L0142: 2, L0519: 2, L0791: 2, H0690: 2, L0743: 2, L0744: 2, L0439: 2, L0749: 2, L0752: 2, L0759: 2, L0588: 2, S6024: 1, S0116: 1, H0484: 1, S0418: 1, L0005: 1, H0645: 1, H0549: 1, H0550: 1, H0156: 1, T0082: 1, H0052: 1, H0545: 1, H0041: 1, H0050: 1, S0388: 1, S0250: 1, H0048: 1, H0424: 1, H0606: 1, S0366: 1, H0059: 1, S0038: 1, H0100: 1, S0112: 1, H0494: 1, H0646: 1, L0769: 1, L0651: 1, L0783: 1, L0809: 1, L0664: 1, L0665: 1, S0328: 1, H0521: 1, S0027: 1, L0750: 1, L0755: 1, L0757: 1 and H0445: 1. AR033: 19, AR089: 15, AR053: 9, AR039: 9, AR055: 9, AR096: 8, AR060: 8, AR052: 7, AR061: 7, AR104: 6	53-69
308	HCHOO84	791776	318	196 - 921	1723	Arg-56 to Lys-73, Arg-86 to Asp-92,	AR033: 3, AR096: 3, AR053: 3, AR052: 3,	157-173

Glu-103 to Arg-109, Ser-146 to His-154, Pro-190 to Ile-195, Val-212 to Cys-218.	AR055: 2, AR104: 2, AR060: 2, AR089: 1, AR039: 1, AR061: 1 L0438: 6, L0439: 6, L0755: 4, L0776: 3, L0754: 3, H0542: 3, H0556: 2, L0157: 2, H0553: 2, L0770: 2, L0769: 2, L0805: 2, L0748: 2, L0747: 2, L0749: 2, L0750: 2, L0779: 2, L0731: 2, S0242: 2, H0265: 1, L0426: 1, H0341: 1, H0484: 1, S0418: 1, S0046: 1, H0393: 1, S0278: 1, S0222: 1, H0013: 1, H0635: 1, H0427: 1, H0156: 1, H0575: 1, L2250: 1, H0046: 1, H0009: 1, H0050: 1, L0471: 1, H0266: 1, H0328: 1, H0428: 1, H0644: 1, H0212: 1, H0591: 1, H0616: 1, H0412: 1, T0041: 1, S0438: 1, H0647: 1, S0426: 1, L0771: 1, L0636: 1, L0789: 1, L4501: 1, L0666: 1, L0665: 1, H0520: 1, H0519: 1, H0593: 1, H0435: 1, H0658: 1, S0152: 1, H0214: 1, H0478: 1, S0027: 1, S0028: 1, L0756: 1,

| 309 | HE8OX93 | 791839 | 319 | 171 - 677 | 1724 | Pro-9 to Pro-24, Arg-55 to Gln-71, Tyr-90 to Val-95, Pro-97 to Arg-102, Val-105 to Asn-118. | L0752: 1, H0343: 1 and S0436: 1. AR055: 14, AR061: 10, AR060: 10, AR039: 9, AR052: 7, AR096: 7, AR089: 6, AR033: 6, AR104: 5, AR053: 5 H0624: 1, H0171: 1 and H0013: 1. | 137-154 |
| 310 | HOFMV90 | 792393 | 320 | 24 - 1412 | 1725 | Asp-3 to Ile-14, Asp-30 to Trp-38, Lys-43 to Thr-52, Pro-54 to Glu-61, Arg-116 to Gly-121, Asn-146 to Arg-157, Pro-259 to Phe-264, Asp-271 to Glu-276, Ser-285 to Asn-293, Ala-358 to Ala-366, Leu-370 to Gln-375, Glu-407 to Thr-412, Ile-421 to Leu-429. | AR096: 3, AR052: 3, AR053: 3, AR033: 3, AR039: 2, AR089: 2, AR104: 2, AR060: 1, AR061: 1, AR055: 1 L0439: 11, L0666: 5, L0740: 5, H0580: 4, H0591: 4, H0519: 4, S0476: 3, L0471: 3, H0553: 3, L0770: 3, L0803: 3, L0752: 3, L0592: 3, S0418: 2, H0013: 2, H0046: 2, H0373: 2, S0003: 2, H0090: 2, H0551: 2, H0412: 2, S0386: 2, L0775: 2, L0655: 2, L0663: 2, L0665: 2, H0547: 2, H0660: 2, H0521: 2, L0748: 2, L0751: 2, L0754: 2, L0747: 2, L0731: 2, L0757: 2, L0759: 2, L0608: 2, | 308-325, 64-80, 211-227, 158-174 |

H0543: 2, H0422: 2, H0171: 1, H0556: 1, H0686: 1, S0040: 1, S0342: 1, H0713: 1, H0717: 1, H0657: 1, S0212: 1, H0125: 1, S0356: 1, S0358: 1, S0046: 1, H0619: 1, H0411: 1, S0222: 1, H0415: 1, H0497: 1, H0486: 1, T0040: 1, L0586: 1, H0575: 1, S0474: 1, H0581: 1, H0052: 1, T0103: 1, H0597: 1, H0545: 1, L0041: 1, L0157: 1, H0571: 1, H0057: 1, H0083: 1, H0266: 1, S0214: 1, H0252: 1, H0040: 1, H0379: 1, H0623: 1, T0042: 1, H0560: 1, H0625: 1, S0440: 1, H0641: 1, S0422: 1, S0426: 1, L0763: 1, L0800: 1, L0766: 1, L5564: 1, L0804: 1, L0606: 1, L0657: 1, L0792: 1, L0659: 1, L0809: 1, L0792: 1, L0532: 1, L0664: 1, H0693: 1, L0352: 1, H0435: 1, H0658: 1, H0672: 1, S0330: 1, S0380: 1, S0152: 1, S0027: 1, S0028: 1, L0777: 1, L0755: 1, L0758: 1, S0434: 1, S0436: 1,

No.	ID				SEQ	Description	Clones / Fragments	Position
311	HTEFV95	792575	321	61 - 573	1726	Glu-94 to Pro-99.	AR055: 13, AR052: 9, AR089: 9, AR053: 8, AR033: 8, AR060: 7, AR096: 7, AR061: 6, AR104: 3, AR039: 2 H0038: 2, S0010: 1, H0252: 1, T0023: 1 and H0616: 1. L0601: 1, L0366: 1, H0542: 1, H0423: 1 and H0293: 1.	107-123
312	HETJA44	792627	322	813 - 148	1727	Glu-16 to Thr-24, Ser-32 to Val-42.	AR055: 8, AR052: 6, AR060: 5, AR096: 5, AR053: 4, AR033: 4, AR089: 4, AR061: 4, AR039: 3, AR104: 2 H0046: 7, S0314: 2, L0751: 2, L0754: 2, H0171: 1, S0222: 1, H0574: 1, H0318: 1, H0194: 1, H0477: 1, S0422: 1, L0373: 1, L0768: 1, L0776: 1, L0655: 1, L0666: 1, L0747: 1, L0780: 1, L0752: 1, S0026: 1 and S0424: 1.	182-198
313	HE2DR93	792628	323	72 - 374	1728	Val-13 to Asn-21, His-24 to Leu-29, Pro-32 to Pro-37, Arg-43 to Leu-48, Cys-83 to Met-94.	AR055: 6, AR053: 3, AR060: 3, AR096: 3, AR052: 3, AR061: 3, AR089: 3, AR033: 2, AR104: 2, AR039: 1	56-82

| 314 | HAJBT15 | 792938 | 324 | 41 - 610 | 1729 | Glu-7 to Arg-22. | AR053: 11, AR039: 10, AR052: 10, AR055: 10, AR033: 10, AR089: 9, AR096: 7, AR060: 5, AR104: 5, AR061: 4, H0052: 4, S0049: 3, H0135: 3, L0803: 3, L0804: 3, L0758: 3, H0171: 2, L0764: 2, L0771: 2, L0775: 2, L0439: 2, L0750: 2, L0779: 2, L0731: 2, L0759: 2, L0603: 2, H0624: 1, H0656: 1, S0442: 1, H0519: 1, H0550: 1, H0370: 1, H0592: 1, H0333: 1, L0623: 1, H0013: 1, H0156: 1, H0590: 1, H0318: 1, S0474: 1, H0546: 1, L0163: 1, H0267: 1, H0179: 1, L0456: 1, H0090: 1, H0077: 1, H0264: 1, S0038: 1, H0494: 1, H0560: 1, H0561: 1, L0763: 1, L0770: 1, L0769: 1, L0772: 1, L0800: 1, L0645: 1, L0662: 1, L0768: 1, L0766: 1, L0774: 1, L0375: 1, L0809: 1, L0789: 1, | | | H0170: 1, H0620: 1, L0774: 1, L0744: 1 and L0748: 1. | | | 126-143 |

315	HDBAD63	793148	325	109 - 606	1730	Met-1 to Arg-15, Asp-58 to Ala-63, Pro-67 to Arg-73.	1, L0666: 1, L0663: 1, H0144: 1, L0438: 1, H0547: 1, H0593: 1, S0126: 1, H0670: 1, S0328: 1, S0330: 1, H0539: 1, H0521: 1, H0696: 1, H0627: 1, L0748: 1, L0749: 1, L0756: 1, L0786: 1, L0780: 1, L0752: 1, H0445: 1, L0605: 1 and L0592: 1.		78-94, 124-140, 37-53, 97-113
316	HE8QH85	793204	326	170 - 532	1731	Glu-34 to Asp-39.	AR096: 21, AR061: 16, AR089: 11, AR052: 7, AR039: 5, AR055: 4, AR104: 4, AR053: 4, AR060: 4, AR033: 4 H0265: 3, H0556: 3, H0657: 3, H0059: 3, H0255: 2, H0661: 2, L0750: 2, H0662: 1, H0638: 1, H0393: 1, H0101: 1, T0082: 1, T0110: 1, H0578: 1, H0083: 1, H0617: 1, H0606: 1, T0042: 1, S0142: 1, H0144: 1, H0547: 1, H0576: 1, S3014: 1, L0747: 1, L0777: 1, L0755: 1 and H0506: 1. AR089: 20, AR033: 19, AR104: 15, AR060: 15, AR061: 12, AR039: 11,	Xp11.4-p11.1	300047, 300062, 300600,	98-115, 62-78, 40-56

225

309470,
309500,
309610,
310500,
310600,
310600,
311050,
312060

AR055: 10, AR096: 8, AR053: 7, AR052: 7, H0547: 25, H0144: 14, H0619: 13, H0135: 13, H0539: 13, L0747: 13, H0013: 12, L0592: 10, H0024: 9, L0769: 8, L0754: 8, H0012: 7, H0424: 7, H0100: 7, L0731: 7, H0624: 6, H0333: 6, L0774: 6, L0665: 6, H0519: 6, S0027: 6, L0759: 6, L0599: 6, S0420: 5, L0471: 5, H0615: 5, H0124: 5, H0520: 5, L0758: 5, L0594: 5, L0595: 5, H0170: 4, H0393: 4, S0278: 4, H0052: 4, H0545: 4, H0046: 4, H0050: 4, H0620: 4, S0051: 4, H0594: 4, H0553: 4, S0036: 4, H0494: 4, L0776: 4, L0666: 4, L0664: 4, S0126: 4, L0748: 4, L0751: 4, L0750: 4, L0605: 4, L0593: 4, S0192: 4, H0543: 4, S0418: 3, S0358: 3, S0046: 3, H0586: 3, H0486: 3, H0156: 3, H0581: 3, H0251: 3, H0546: 3, H0081: 3, H0015: 3, H0083: 3, H0687: 3,

S0022: 3, H0328: 3, H0428: 3, H0551: 3, L0772: 3, L0764: 3, L0521: 3, L0662: 3, L0768: 3, L0809: 3, S0380: 3, L0439: 3, S0212: 2, H0483: 2, S0356: 2, S0007: 2, H0351: 2, H0610: 2, H0587: 2, H0574: 2, H0318: 2, H0544: 2, H0009: 2, H0373: 2, T0010: 2, S6028: 2, H0266: 2, H0252: 2, H0032: 2, H0673: 2, H0087: 2, L0351: 2, H0641: 2, S0210: 2, L0369: 2, L0762: 2, L0803: 2, L0775: 2, L0651: 2, L0783: 2, L0519: 2, L0565: 2, H0593: 2, H0690: 2, S0152: 2, H0478: 2, S0037: 2, S3014: 2, S0028: 2, S0032: 2, L0756: 2, L0752: 2, L0587: 2, S0196: 2, H0171: 1, H0395: 1, S0040: 1, H0295: 1, H0294: 1, S0114: 1, S0430: 1, H0484: 1, H0661: 1, H0664: 1, H0662: 1, H0176: 1, S0442: 1, S0354: 1, S0376: 1, S0360: 1, H0208: 1, S0045: 1, H0645: 1, S0300: 1, L0717: 1,

H0261: 1, H0549: 1, H0550: 1, S0222: 1, S0220: 1, H0441: 1, H0403: 1, H0438: 1, H0632: 1, T0039: 1, H0244: 1, H0250: 1, H0069: 1, H0427: 1, H0575: 1, H0374: 1, H0196: 1, H0194: 1, H0085: 1, H0597: 1, H0327: 1, H0150: 1, H0172: 1, H0123: 1, H0023: 1, H0200: 1, H0051: 1, H0275: 1, H0356: 1, H0354: 1, H0271: 1, H0286: 1, H0039: 1, T0006: 1, H0033: 1, H0604: 1, H0644: 1, L0142: 1, H0628: 1, H0617: 1, H0383: 1, H0674: 1, H0163: 1, H0634: 1, H0272: 1, H0268: 1, H0412: 1, H0413: 1, S0038: 1, T0041: 1, T0042: 1, H0561: 1, S0150: 1, S0144: 1, S0142: 1, L0638: 1, L0637: 1, L0374: 1, L0773: 1, L0794: 1, L0649: 1, L0650: 1, L0375: 1, L0378: 1, L0654: 1, L0661: 1, L0657: 1, L0634: 1, L0659: 1, L0636: 1, L0647: 1, L0367: 1, L0663: 1, H0701: 1, L0438: 1,

| 317 | HAICU52 | 793373 | 327 | 162 - 662 | 1732 | Arg-14 to Ser-23, Arg-50 to Trp-60. | AR052: 187, AR053: 127, AR096: 125, AR055: 118, AR089: 96, AR104: 82, AR061: 73, AR060: 73, AR039: 71, AR033: 64, S0418: 2, S0007: 2, S0132: 2, H0559: 2, H0520: 2, H0547: 2, H0650: 1, H0483: 1, S0046: 1, S0476: 1, H0012: 1, H0604: 1, S0366: 1, H0551: 1, S0150: 1, S0378: 1, S0152: 1, S3014: 1, L0439: 1 and S0194: 1. | H0689: 1, H0683: 1, H0670: 1, H0660: 1, H0672: 1, S0328: 1, S0330: 1, H0521: 1, S0406: 1, H0555: 1, H0436: 1, L0611: 1, S0390: 1, L0779: 1, L0780: 1, L0757: 1, H0707: 1, L0589: 1, S0011: 1, H0668: 1, H0653: 1, H0667: 1, H0542: 1, L0469: 1, H0422: 1 and H0506: 1. | 132-148 |
| 318 | HE6BJ49 | 793433 | 328 | 59 - 469 | 1733 | Met-1 to Ala-6, Arg-16 to Thr-28, Leu-34 to Thr-49, Ile-97 to Ile-104, Glu-129 to Arg-137. | AR039: 70, AR053: 41, AR104: 39, AR052: 38, AR096: 36, AR033: 36, AR055: 34, AR060: 29, AR089: 24, AR061: 16 | | 65-81 |

319	HE8TJ39	793553	329	259 - 615	1734		65-85, 5-21
					Arg-86 to Val-91.	L0748: 7, H0039: 5, H0619: 4, L0439: 4, S0222: 3, H0494: 3, L0438: 3, H0012: 2, H0032: 2, H0547: 2, L0740: 2, L0759: 2, H0556: 1, S0134: 1, H0580: 1, S0278: 1, H0415: 1, H0586: 1, T0109: 1, H0013: 1, H0575: 1, S0010: 1, H0581: 1, H0046: 1, L2244: 1, L0471: 1, T0010: 1, H0354: 1, H0687: 1, H0031: 1, H0553: 1, H0644: 1, H0400: 1, H0591: 1, H0038: 1, H0040: 1, H0551: 1, H0623: 1, H0100: 1, S0440: 1, S0344: 1, L0387: 1, L0766: 1, L0790: 1, H0520: 1, H0519: 1, H0660: 1, S0152: 1, S0044: 1, H0436: 1, L0751: 1, L0731: 1, S0031: 1, L0592: 1, S0242: 1 and H0423: 1. AR033: 5, AR053: 3, AR052: 3, AR096: 3, AR089: 3, AR061: 3, AR060: 2, AR104: 2, AR039: 2, AR055: 1 L0777: 3, H0013: 2 and L0749: 1.	

| 320 | HFIBG92 | 793632 | 330 | 104 - 481 | 1735 | Asp-29 to Thr-34, Val-55 to Gly-65, Glu-114 to Ala-119. | AR052: 3, AR053: 3, AR096: 3, AR055: 2, AR033: 1, AR060: 1, AR089: 1, AR061: 1, AR104: 1, AR039: 0 H0556: 5, H0265: 2, S0418: 2, H0575: 2, L0659: 2, S0328: 2, L0731: 2, L0759: 2, S0192: 2, H0295: 1, T0049: 1, S0046: 1, S0476: 1, S0278: 1, H0486: 1, H0250: 1, H0156: 1, H0544: 1, L0041: 1, H0081: 1, H0266: 1, H0264: 1, T0041: 1, T0042: 1, H0561: 1, L0639: 1, L0637: 1, L0662: 1, L0767: 1, L0768: 1, L0509: 1, L0382: 1, L2269: 1, L0663: 1, S0310: 1, H0672: 1, S0380: 1, H0521: 1, S0037: 1, S0027: 1, L0747: 1, L0777: 1, S0260: 1, S0434: 1, S0436: 1, L0592: 1, H0543: 1 and H0008: 1. | | 96-112 |
| 321 | HDPBJ94 | 794297 | 331 | 39 - 425 | 1736 | Gly-10 to Pro-19, Pro-25 to Arg-33, Ser-43 to Gly-52. | AR055: 3, AR052: 3, AR089: 2, AR033: 2, AR053: 2, AR060: 2, AR096: 1, AR061: 1, AR104: 1, AR039: 0 | | 97-117 |

#	Name				SEQ ID			Amino acid regions
322	HPIAX11	794354	332	342 - 1259	1737		S0116: 1, L0768: 1, L0656: 1, H0521: 1, L0070: 1, L0439: 1 and L0779: 1. AR055: 11, AR061: 9, AR033: 9, AR089: 8, AR052: 8, AR104: 7, AR096: 7, AR053: 6, AR060: 5, AR039: 3 H0616: 1, S0150: 1 and L0581: 1.	254-282, 224-246, 119-140, 160-179, 200-217
323	HBGMW95	795325	333	1 - 300	1738	Arg-8 to Gly-17.	AR053: 1, AR052: 1, AR055: 1, AR033: 1, AR089: 1, AR061: 1, AR104: 1, AR060: 1, AR096: 0, AR039: 0 H0255: 1, S0045: 1, S0278: 1, H0181: 1, H0617: 1, S0428: 1, S0053: 1, S0028: 1 and L0597: 1.	40-61, 65-81
324	HUSLI83	796477	334	883 - 578	1739	Phe-2 to Gln-7.	AR039: 18, AR033: 11, AR053: 10, AR089: 9, AR052: 8, AR096: 8, AR055: 7, AR060: 6, AR104: 5, AR061: 5 L0666: 8, L0766: 4, H0038: 3, L0664: 3, L0665: 3, H0265: 2, S0360: 2, H0046: 2, L0663: 2, H0520: 2, L0748: 2, L0751: 2,	75-99

325	HBGDP38	796622	335	55 - 495	1740				112-128, 72-88
						L0749: 2, L0779: 2, L0777: 2, L0758: 2, H0341: 1, H0638: 1, S0356: 1, S0358: 1, S0045: 1, H0261: 1, S0222: 1, H0632: 1, H0427: 1, H0597: 1, T0010: 1, H0266: 1, S0003: 1, H0412: 1, H0561: 1, S0002: 1, L0640: 1, L0638: 1, L0646: 1, L0771: 1, L0768: 1, L0375: 1, L0651: 1, L0776: 1, L0659: 1, L0438: 1, H0547: 1, H0658: 1, L0611: 1, S3014: 1, L0439: 1, L0754: 1, L0747: 1, L0750: 1, L0755: 1 and S0026: 1. AR033: 2, AR096: 2, AR104: 1, AR060: 1, AR089: 1, AR061: 0, AR052: 0, AR055: 0, AR053: 0, AR039: 0 S0028: 3, S0001: 2, S0356: 2, H0617: 2, L0809: 2, L0439: 2, L0731: 2, L0361: 2, S0040: 1, S0045: 1, H0619: 1, S0278: 1, H0250: 1, H0156: 1, H0231: 1, H0181: 1, L0456: 1, L0375: 1, L0783: 1, L0663: 1, H0144: 1, L0438: 1, S0390:			

| 326 | HTXEC55 | 798103 | 336 | 195 - 785 | 1741 | Trp-7 to Gly-21, Arg-24 to Glu-31, Ala-69 to Trp-80, Arg-129 to Pro-135, Ser-142 to Phe-147, Phe-151 to Gly-159. | 1, L0747: 1, L0759: 1 and S0031: 1. | AR053: 19, AR096: 16, AR052: 16, AR055: 9, AR089: 8, AR061: 6, AR060: 6, AR033: 6, AR039: 3, AR104: 2 L0777: 5, H0265: 2, H0556: 2, S0358: 2, L0351: 2, L0769: 2, L0766: 2, L0666: 2, L0748: 2, L0439: 2, H0657: 1, H0255: 1, H0637: 1, H0549: 1, S0222: 1, H0586: 1, H0427: 1, H0597: 1, H0545: 1, H0012: 1, S0214: 1, H0424: 1, H0213: 1, H0628: 1, H0090: 1, H0412: 1, L0637: 1, L0800: 1, L0644: 1, L0662: 1, L0381: 1, L0776: 1, L0655: 1, L0659: 1, L0809: 1, L0790: 1, L0792: 1, L0665: 1, H0547: 1, S0126: 1, H0435: 1, H0670: 1, S0432: 1, L0749: 1, L0758: 1, H0543: 1, H0423: 1 and H0422: 1. | 46-64, 111-127, 85-101 |
| 327 | HFXGI63 | 799513 | 337 | 1879 - 2349 | 1742 | Ala-3 to Thr-27, Arg-29 to Ser-35, | AR055: 9, AR060: 5, AR061: 4, AR033: 3, | | 62-78, 87-103 |

| 328 | HAMGW19 | 799889 | 338 | 119 - 475 | 1743 | Gly-43 to Trp-62, Gln-107 to Gln-114, Arg-132 to Lys-140. | AR052: 3, AR089: 3, AR096: 2, AR053: 2, AR104: 2, AR039: 1 S0222: 2, H0100: 2, L0438: 2, S0114: 1, S0001: 1, H0208: 1, H0123: 1, H0012: 1, H0620: 1, S6028: 1, H0328: 1, H0413: 1, S0038: 1, T0042: 1, L0439: 1 and L0593: 1. | | 89-105 |
| 329 | HDPTA89 | 800344 | 339 | 173 - 949 | 1744 | Thr-4 to Pro-28, Pro-51 to His-62, Pro-83 to Thr-91, Phe-100 to Trp-105, Ile-167 to Gln-182. | AR096: 1, AR055: 1, AR089: 1, AR061: 1, AR033: 1, AR052: 1, AR104: 1, AR060: 1, AR033: 0, AR061: 0, AR055: 0, AR039: 0, AR053: 0, H0560: 2 L0777: 11, L0751: 10, L0769: 7, L0758: 6, L0766: 5, H0617: 4, L0771: 4, L0776: 4, L0439: 4, L0757: 4, L0759: 4, H0253: 3, H0494: 3, L0761: 3, H0521: 3, L0754: 3, H0318: 2, H0150: 2, L0794: 2, L0805: | | 225-248, 106-122 |

330	HSLD085	801935	340	100 - 618	1745	[clones]	1p36.3-p36.2	120550, 120570, 120575, 130500, 133200	25-46, 101-122, 46-62, 126-142

Clones column:

2, L0665: 2, L0743: 2, L0750: 2, L0752: 2, H0265: 1, S0342: 1, H0713: 1, S0218: 1, L0785: 1, H0484: 1, L0481: 1, S0420: 1, S0444: 1, H0637: 1, S0045: 1, S0046: 1, H0549: 1, H0486: 1, H0427: 1, H0599: 1, H0618: 1, H0194: 1, T0115: 1, H0597: 1, H0231: 1, H0083: 1, H0266: 1, H0622: 1, H0424: 1, H0213: 1, H0553: 1, H0181: 1, H0087: 1, H0551: 1, H0623: 1, H0100: 1, H0560: 1, S0150: 1, H0695: 1, L0796: 1, L0643: 1, L0662: 1, L0803: 1, L0775: 1, L0809: 1, L0789: 1, L0663: 1, L0664: 1, H0691: 1, S0126: 1, H0682: 1, S0330: 1, S0152: 1, L0749: 1, L0756: 1, L0779: 1, L0780: 1, L0753: 1, H0445: 1 and H0667: 1.

Pro-3 to Lys-12, Glu-17 to Leu-23, Ala-148 to Leu-173.

AR055: 12, AR061: 11, AR060: 10, AR052: 8, AR039: 7, AR033: 12, AR089: 10, AR053: 9, AR104: 8, AR096: 6

153454,
167410,
236250,
256700,
600975

L0755: 6, L0769: 4,
H0009: 3, H0012: 3, L0783:
3, L0749: 3, L0750: 3,
L0779: 3, L0731: 3, S0376:
2, H0545: 2, S0051: 2,
H0606: 2, H0100: 2, L0638:
2, L0665: 2, S0028: 2,
L0751: 2, L0747: 2, L0756:
2, L0758: 2, L0603: 2,
H0265: 1, H0294: 1, H0341:
1, S0212: 1, S0410: 1,
S0045: 1, H0393: 1, H0549:
1, S0222: 1, H0586: 1,
H0331: 1, L0623: 1, T0060:
1, H0581: 1, S0049: 1,
H0309: 1, L0471: 1, H0620:
1, H0024: 1, H0266: 1,
H0428: 1, H0213: 1, L0456:
1, S0366: 1, S0036: 1,
H0040: 1, S0142: 1, L0763:
1, L0371: 1, L0772: 1,
L0372: 1, L0646: 1, L0764:
1, L0773: 1, L0766: 1,
L0774: 1, L0775: 1, L0776:
1, L0809: 1, L0519: 1,
H0520: 1, H0519: 1, S0126:
1, H0660: 1, S0350: 1,
S0406: 1, H0436: 1, S3012:
1, L0752: 1, L0757: 1,
S0436: 1, L0592: 1, S0276:

331	HDQDF38	805499	341	791 - 1792	1746	Pro-3 to Lys-13, Thr-26 to Thr-41.	1 and H0422: 1. AR096: 3, AR089: 2, AR052: 1, AR061: 1, AR033: 1, AR053: 1, AR060: 1, AR055: 0, AR039: 0, AR104: 0 L0766: 7, L0662: 4, L0789: 4, L0748: 4, L0749: 4, L0769: 3, L0776: 3, L0438: 3, H0521: 3, H0556: 2, S0360: 2, L0717: 2, L0794: 2, L0666: 2, L0663: 2, H0547: 2, S0028: 2, L0754: 2, H0422: 2, T0049: 1, H0657: 1, H0411: 1, H0586: 1, H0013: 1, H0098: 1, H0575: 1, L0471: 1, L0163: 1, L0455: 1, S0366: 1, S0036: 1, H0038: 1, H0551: 1, L0763: 1, L0800: 1, L0387: 1, L0803: 1, L0805: 1, L0518: 1, L0809: 1, H0660: 1, H0696: 1, H0555: 1, L0612: 1, S0032: 1, L0742: 1, L0740: 1, L0747: 1, L0750: 1, L0756: 1, L0777: 1, L0757: 1, H0423: 1 and L0600: 1.	311-330
332	HULAW69	805628	342	271 -	1747	Phe-44 to Asn-55,	AR033: 14, AR096: 13,	65-84, 20-

| 38 | Arg-86 to Gly-92. | 678 | AR104: 11, AR039: 10, AR061: 9, AR052: 9, AR055: 9, AR060: 8, AR089: 8, AR053: 5 S0278: 15, S0126: 14, L0742: 13, L0754: 11, L0758: 10, L0751: 8, L0747: 8, L0748: 7, H0305: 6, S0360: 6, H0530: 6, H0545: 6, L0776: 6, L0744: 6, H0484: 5, H0638: 5, S0007: 5, S0045: 5, H0617: 5, S0144: 5, L0766: 5, L0805: 5, S0027: 5, L0750: 5, L0757: 5, H0445: 5, H0542: 5, H0657: 4, S0046: 4, H0370: 4, S0051: 4, H0424: 4, H0087: 4, H0551: 4, S0142: 4, S0344: 4, L0763: 4, L0770: 4, L0764: 4, L0662: 4, L0768: 4, L0803: 4, L0775: 4, H0539: 4, H0521: 4, L0743: 4, L0752: 4, L0603: 4, H0543: 4, S0040: 3, S0442: 3, S0358: 3, S0408: 3, H0549: 3, H0486: 3, H0544: 3, H0150: 3, H0023: 3, H0510: 3, H0646: 3, L0771: 3, L0773: 3, L0794: 3, L0774: |

3, L0655: 3, L0659: 3,
S0404: 3, S3014: 3, S0028:
3, H0422: 3, H0556: 2,
S6024: 2, H0295: 2, S0116:
2, H0341: 2, S0282: 2,
S0029: 2, H0661: 2, H0580:
2, H0441: 2, H0069: 2,
L0021: 2, H0599: 2, T0048:
2, S0049: 2, H0327: 2,
H0050: 2, H0057: 2, H0083:
2, H0033: 2, H0213: 2,
H0181: 2, H0606: 2, H0634:
2, S0426: 2, L0769: 2,
L0639: 2, L0761: 2, L0373:
2, L0646: 2, L0378: 2,
L0806: 2, L0517: 2, S0052:
2, H0670: 2, H0710: 2,
H0522: 2, H0696: 2, L0745:
2, L0756: 2, L0753: 2,
L0755: 2, L0731: 2, S0434:
2, S0436: 2, L0588: 2,
H0653: 2, H0667: 2, S0194:
2, S0196: 2, H0423: 2,
H0352: 2, H0170: 1, H0171:
1, H0265: 1, H0685: 1,
H0713: 1, H0716: 1, H0294:
1, S0114: 1, L0002: 1,
H0656: 1, H0381: 1, H0483:
1, H0402: 1, H0589: 1,
H0125: 1, S0356: 1, H0675:

1, H0728: 1, S0132: 1,
S6022: 1, S0222: 1, H0392:
1, H0607: 1, H0592: 1,
H0586: 1, H0333: 1, H0492:
1, T0114: 1, S0280: 1,
T0082: 1, H0618: 1, H0253:
1, S0010: 1, H0581: 1,
H0251: 1, H0309: 1, H0234:
1, H0546: 1, H0178: 1,
H0567: 1, H0081: 1, H0012:
1, H0024: 1, H0594: 1,
H0266: 1, H0179: 1, H0416:
1, H0188: 1, H0290: 1,
H0292: 1, S0003: 1, H0252:
1, H0328: 1, S0368: 1,
H0604: 1, H0553: 1, H0673:
1, H0708: 1, H0316: 1,
H0598: 1, H0040: 1, H0063:
1, H0264: 1, H0413: 1,
S0038: 1, T0041: 1, H0560:
1, H0625: 1, S0464: 1,
S0438: 1, S0440: 1, H0130:
1, H0641: 1, H0529: 1,
L0369: 1, L0371: 1, L0772:
1, L0800: 1, L0642: 1,
L0644: 1, L0645: 1, L0521:
1, L0364: 1, L5564: 1,
L5568: 1, L0523: 1, L0653:
1, L0807: 1, L0527: 1,
L0636: 1, L0782: 1, L0809:

| 333 | HE9QK23 | 805751 | 343 | 321 - 737 | 1748 | Met-1 to Phe-10, Gly-13 to Leu-56, Gln-132 to Thr-139. | 1, L0529: 1, L0647: 1, L0664: 1, S0428: 1, S0216: 1, H0144: 1, H0520: 1, H0547: 1, H0689: 1, S0378: 1, S0152: 1, S0406: 1, H0187: 1, H0576: 1, S3012: 1, S0037: 1, S0206: 1, L0740: 1, L0749: 1, L0779: 1, L0759: 1, L0605: 1, L0608: 1, S0106: 1, H0216: 1, S0192: 1 and S0276: 1.
AR055: 8, AR061: 7, AR033: 5, AR089: 4, AR053: 4, AR096: 4, AR052: 4, AR060: 4, AR039: 0, AR104: 0
H0616: 3, L0662: 3, L0754: 3, T0039: 2, L0758: 2, S0360: 1, S0045: 1, S6026: 1, S0222: 1, H0427: 1, H0038: 1, L0769: 1, L0805: 1, L0776: 1, L0659: 1, L0789: 1, H0144: 1, L0779: 1, L0777: 1, L0757: 1 and S0192: 1. | | 72-96 |
| 334 | HNTTBB36 | 806145 | 344 | 93 - 410 | 1749 | | AR033: 8, AR089: 3, AR096: 2, AR104: 2, AR053: 1, AR060: 1, AR061: 1, AR052: 0, | 2 | 48-65 |

335	HETJG63	806385	345	109 - 462	1750		AR039: 0, AR055: 0 S0346: 1, L0438: 1, H0520: 1, H0547: 1 and H0519: 1. AR060: 10, AR055: 7, AR033: 5, AR096: 4, AR052: 4, AR039: 3, AR089: 3, AR061: 3, AR104: 2, AR053: 2 H0046: 2 and H0616: 1.	64-87
336	HLDRO45	806430	346	186 - 674	1751	Asn-133 to Trp-143, Ala-145 to Phe-151.	AR096: 2, AR039: 1, AR053: 1, AR089: 1, AR055: 1, AR060: 1, AR061: 1, AR033: 1, AR104: 0, AR052: 0 L0748: 11, L0752: 6, H0266: 5, L0770: 4, L0740: 4, L0750: 4, L0596: 4, S0212: 3, L0766: 3, L0803: 3, L0756: 3, H0402: 2, H0427: 2, S0010: 2, T0003: 2, T0067: 2, S0386: 2, T0041: 2, L0769: 2, L0796: 2, L0804: 2, H0576: 2, L0747: 2, H0445: 2, L0588: 2, L0599: 2, H0543: 2, H0556: 1, S6024: 1, H0341: 1, H0306: 1, H0340: 1, H0351: 1, S6014: 1, H0431:	99-130, 13-38, 57-73, 36-52

| 337 | HFIDZZ38 | 806756 | 347 | 45 - 584 | 1752 | 1, H0331: 1, T0039: 1, S0280: 1, L0021: 1, H0036: 1, H0390: 1, H0052: 1, H0041: 1, H0123: 1, H0057: 1, H0083: 1, S0023: 1, H0510: 1, S0003: 1, H0628: 1, H0032: 1, H0674: 1, H0598: 1, S0036: 1, H0551: 1, S0448: 1, L0764: 1, L0648: 1, L0768: 1, L0375: 1, L0525: 1, L0809: 1, L0519: 1, L0647: 1, L0788: 1, S0126: 1, H0521: 1, S0406: 1, S3012: 1, S3014: 1, S0027: 1, L0439: 1, L0779: 1, L0757: 1, L0758: 1, H0444: 1, H0595: 1, H0665: 1, S0192: 1, H0423: 1 and H0352: 1.

AR052: 3, AR033: 3, AR089: 3, AR055: 2, AR096: 2, AR060: 2, AR061: 2, AR039: 2, AR104: 2, AR053: 1 L0439: 5, L0777: 5, H0052: 4, L0803: 4, L0789: 4, L0666: 4, H0556: 3, H0090: 3, L0770: 3, L0766: 3, H0670: 3, L0747: 3, L0756: 3, L0755: 3, S0354: | 64-85, 24-40, 115-131, 91-107, 7-23 |

| 338 | HLMDO95 | 810257 | 348 | 113 - 484 | 1753 | Met-1 to Asn-8. | 2, S0408: 2, H0580: 2, L0021: 2, H0135: 2, L0768: 2, L0805: 2, L0809: 2, L0787: 2, L0438: 2, H0547: 2, S0406: 2, L0754: 2, L0745: 2, L0758: 2, L0759: 2, S0192: 2, L0393: 1, H0657: 1, H0656: 1, H0661: 1, H0662: 1, S0356: 1, S0358: 1, S0360: 1, H0549: 1, H0486: 1, H0581: 1, H0009: 1, H0014: 1, H0548: 1, H0268: 1, S0015: 1, S0144: 1, S0344: 1, L0769: 1, L0800: 1, L0662: 1, L0767: 1, L0794: 1, L0804: 1, L0774: 1, L0775: 1, L0375: 1, L0632: 1, L0655: 1, L0807: 1, L0659: 1, L0517: 1, L0783: 1, L0647: 1, L0663: 1, L0664: 1, L0665: 1, L0352: 1, H0690: 1, H0521: 1, S0044: 1, L0740: 1, L0749: 1, L0752: 1, L0731: 1, H0543: 1, H0423: 1 and H0506: 1. AR089: 28, AR096: 27, AR053: 19, AR052: 18, AR039: 17, AR060: 17, AR033: 14, AR104: 11, | 25-46, 94-112, 56-72 |

| 339 | HSLGA19 | 810406 | 349 | 5 - 859 | 1754 | Leu-28 to Arg-33, Glu-44 to Thr-49, Tyr-66 to Arg-72, Pro-82 to Ile-103. | AR055: 11, AR061: 7 AR052: 3, AR055: 3, AR061: 2, AR096: 2, AR089: 2, AR060: 2, AR033: 1, AR053: 1, AR039: 1, AR104: 1 H0381: 1, H0255: 1, S0052: 1 and S0028: 1. | 192-213 |
| 340 | HGBGM53 | 810461 | 350 | 38 - 355 | 1755 | Gln-35 to Leu-40. | AR055: 8, AR052: 8, AR053: 6, AR060: 5, AR061: 4, AR089: 4, AR096: 4, AR033: 4, AR039: 3, AR104: 2 L0439: 6, H0556: 3, H0052: 2, H0413: 2, L0748: 2, L0754: 2, L0731: 2, H0543: 2, H0341: 1, S0418: 1, S0442: 1, S0360: 1, H0734: 1, S0007: 1, S0045: 1, H0393: 1, H0411: 1, H0545: 1, H0569: 1, H0014: 1, H0271: 1, H0416: 1, H0286: 1, H0130: 1, H0649: 1, H0529: 1, L0523: 1, L0438: 1, H0547: 1, H0593: 1, H0435: 1, S0380: 1, L0741: 1, L0744: 1, L0740: 1, L0749: 1, S0434: 1, | 55-71, 77-93 |

| 341 | HIBCO73 | 810586 | 351 | 3 - 1100 | 1756 | S0436: 1, L0366: 1, H0423: 1 and S0456: 1.

AR096: 6, AR053: 6, AR052: 5, AR089: 3, AR055: 3, AR104: 2, AR060: 2, AR033: 2, AR061: 2, AR039: 1

L0748: 6, L0666: 3, L0749: 3, S0420: 2, H0486: 2, L0809: 2, L0789: 2, L0438: 2, H0521: 2, H0542: 2, H0713: 1, H0716: 1, S0212: 1, S0001: 1, H0125: 1, L0617: 1, S0356: 1, S0360: 1, S0300: 1, H0575: 1, H0253: 1, H0318: 1, H0581: 1, H0309: 1, H0081: 1, T0010: 1, H0634: 1, H0412: 1, H0059: 1, H0100: 1, L0769: 1, L0794: 1, L0803: 1, L0774: 1, L0806: 1, L0805: 1, L0659: 1, L0382: 1, L0663: 1, L0665: 1, S0126: 1, L0743: 1, L0777: 1 and L0592: 1. | | 151-168, 61-77 |
| 342 | HDPOM13 | 810899 | 352 | 183 - 779 | 1757 | Ser-34 to His-42, Pro-51 to Asp-63. | AR053: 2, AR055: 2, AR033: 1, AR096: 1, AR061: 1, AR104: 1, AR060: 1, AR039: 1. | 181-199 |

							AR089: 0, AR052: 0 H0521: 8, H0522: 3, H0644: 2, L0769: 2, L0779: 2, H0580: 1, H0549: 1, S0002: 1 and L0791: 1.			
343	HMEIR75	811268	353	171 - 671	1758	Asn-20 to Arg-26, Pro-74 to Glu-79.	AR033: 7, AR055: 6, AR060: 4, AR089: 4, AR052: 4, AR061: 4, AR053: 4, AR039: 2, AR096: 1, AR104: 1 H0266: 2, S0354: 1, H0619: 1, S0250: 1, L0438: 1 and L0758: 1.	2p13	203800, 602404	81-97
344	HOECE93	812221	354	54 - 575	1759	Leu-27 to Gln-34, Ser-48 to Ile-56, Lys-73 to Ser-86.	AR055: 7, AR033: 5, AR096: 5, AR060: 5, AR104: 4, AR061: 3, AR089: 3, AR053: 3, AR052: 2, AR039: 0 H0144: 6, L0803: 4, L0439: 4, L0749: 3, H0421: 3, H0052: 2, L0769: 2, L0774: 2, L0809: 2, L0438: 2, L0747: 2, L0731: 2, L0757: 2, L0758: 2, H0657: 1, L0021: 1, S0049: 1, H0327: 1, H0424: 1, H0674: 1, L0455: 1, L0456: 1, S0002: 1, L0763: 1, L0761: 1, L0642: 1, L0643: 1,			154-174, 126-144

| 345 | HLHGA65 | 812445 | 355 | 22 - 444 | 1760 | Thr-3 to Ser-16, His-30 to Asp-35, Thr-130 to Leu-135. | L0775: 1, L0793: 1, L0666: 1, H0693: 1, L0352: 1, S0126: 1, S0037: 1, L0742: 1, L0750: 1, L0759: 1 and L0361: 1. AR055: 12, AR052: 10, AR033: 9, AR060: 7, AR053: 7, AR061: 6, AR096: 6, AR089: 5, AR039: 3, AR104: 3 H0617: 4, H0024: 1, S0028: 1 and L0759: 1. | 84-111, 39-57 |
| 346 | HMABF89 | 812465 | 356 | 67 - 552 | 1761 | Cys-20 to Pro-29, Glu-46 to Asp-52, Asp-59 to Ser-73. | AR055: 9, AR060: 7, AR033: 6, AR061: 6, AR089: 5, AR053: 5, AR052: 5, AR096: 4, AR039: 3, AR104: 3 H0717: 2, H0589: 2, S0444: 2, S0386: 2, L3905: 2, H0521: 2, S0356: 1, H0549: 1, H0575: 1, S0010: 1, T0010: 1, H0031: 1, H0553: 1, H0135: 1, H0090: 1, H0551: 1, S0144: 1, S0142: 1, L0521: 1, L0662: 1, L0803: 1, L0775: 1, L0663: 1, S0428: 1, H0144: 1, H0519: 1, H0522: 1, S0028: 1, L0592: 1 and | 125-156, 27-46, 100-123 |

347	HLKDC74	812760	357	195 - 932	1762	Gly-25 to Gly-30, Pro-105 to Val-112, Glu-137 to Cys-146, Pro-215 to Cys-223, Pro-226 to Arg-240.	H0136: 1. AR060: 1, AR055: 1, AR096: 0, AR061: 0, AR039: 0, AR104: 0, AR033: 0, AR089: 0, AR052: 0, AR053: 0 H0542: 2, H0584: 1, H0611: 1, H0592: 1, H0427: 1, L0644: 1, L0648: 1, L0806: 1, H0522: 1, H0543: 1 and H0422: 1.	1p36.3	120550, 120570, 120575, 153454, 236250, 256700	171-200, 4-24
348	HDTAV81	813300	358	311 - 766	1763	Met-1 to Cys-8.	AR053: 11, AR096: 9, AR052: 9, AR039: 6, AR089: 4, AR033: 4, AR055: 3, AR060: 3, AR104: 3, AR061: 2 H0556: 2, H0457: 2, H0634: 2, H0521: 2, H0436: 2, H0341: 1, S0418: 1, H0486: 1, H0581: 1, H0271: 1, L0362: 1 and H0423: 1.			105-122
349	HETIZ34	815417	359	74 - 1915	1764	Pro-46 to Tyr-51.	AR033: 10, AR104: 9, AR055: 8, AR052: 8, AR060: 8, AR089: 6, AR096: 6, AR053: 5, AR061: 3, AR039: 3 S0222: 8, L0662: 8, L0005: 7, L0665: 7, L0659: 6, L0666: 6, H0547: 6,			477-500, 385-401, 448-464, 13-29, 514-530, 581-597, 166-182

250

L0740: 6, S6028: 4, L0483:
4, L0438: 4, L0754: 4,
L0756: 4, L0779: 4, S0194:
4, S0049: 3, S0388: 3,
L0646: 3, L0521: 3, L0663:
3, L0664: 3, H0435: 3,
H0696: 3, L0439: 3, L0777:
3, H0624: 2, H0171: 2,
S0356: 2, S0442: 2, S0354:
2, S0360: 2, S0408: 2,
H0046: 2, H0563: 2, L0471:
2, S0051: 2, H0266: 2,
H0040: 2, H0623: 2, S0440:
2, L0598: 2, L0520: 2,
L0641: 2, L0771: 2, L0768:
2, L0774: 2, L0805: 2,
L0776: 2, L0518: 2, L0565:
2, H0519: 2, H0670: 2,
H0660: 2, H0648: 2, H0672:
2, S0028: 2, L0751: 2,
L0731: 2, L0758: 2, S0031:
2, L0596: 2, L0595: 2,
S0026: 2, S0196: 2, H0170:
1, H0686: 1, H0685: 1,
H0717: 1, H0381: 1, S0212:
1, H0662: 1, S0418: 1,
S0376: 1, S0045: 1, S0046:
1, H0411: 1, H0369: 1,
H0550: 1, H0438: 1, H0602:
1, T0040: 1, H0013: 1,

350	HWLIX39	815669	360	84 - 1052	1765	Ser-4 to Glu-11, Tyr-14 to Lys-29, Arg-101 to Arg-106, Gly-239 to Tyr-246.	H0427: 1, S0280: 1, H0590: 1, H0390: 1, S0474: 1, H0052: 1, T0110: 1, H0545: 1, H0178: 1, H0562: 1, H0123: 1, H0373: 1, H0201: 1, H0355: 1, S0003: 1, H0615: 1, H0428: 1, T0006: 1, H0031: 1, H0553: 1, H0032: 1, S0036: 1, H0163: 1, H0551: 1, L0564: 1, L0370: 1, S0370: 1, S0450: 1, L0769: 1, L0637: 1, L5565: 1, L0372: 1, L0773: 1, L0650: 1, L0806: 1, L0527: 1, L0526: 1, L0783: 1, L0809: 1, S0374: 1, H0520: 1, H0682: 1, H0659: 1, S0328: 1, S0330: 1, H0539: 1, S0380: 1, L0602: 1, S0152: 1, H0555: 1, L0753: 1, L0755: 1, L0759: 1, S0260: 1, S0434: 1, S0436: 1, L0366: 1, H0667: 1 and S0242: 1.	AR039: 23, AR104: 15, AR033: 15, AR096: 14, AR052: 12, AR089: 12, AR053: 11, AR055: 9, AR060: 8, AR061: 7 S0406: 2, S0358: 1, S0278: 1.	40-65, 197-214, 107-123, 160-176, 63-79

351	HDTJT12	823632	361	37 - 354	1766	Pro-14 to Gly-23, Arg-93 to Pro-100.		14q32.1	107280, 107280, 107400, 107400, 122500, 186960, 245200, 601841	68-93, 39-59

AR089: 5, AR060: 3, AR033: 3, AR096: 3, AR039: 1, AR052: 1, AR061: 1, AR055: 0, AR104: 0, AR053: 0 H0618: 5, H0253: 5, L0758: 3, H0370: 2, H0107: 2, H0674: 2, H0135: 2, L0803: 2, H0521: 2, L0747: 2, L0779: 2, H0583: 1, S0212: 1, S0442: 1, S0358: 1, S0360: 1, S0408: 1, H0580: 1, S0046: 1, H0619: 1, H0393: 1, H0486: 1, H0635: 1, H0599: 1, H0590: 1, H0083: 1, H0510: 1, H0038: 1, H0488: 1, H0623: 1, H0494: 1, S0382: 1, L0770: 1, L0769: 1, L0648: 1, L0549: 1, L0791: 1, S0052: 1, H0519: 1, H0670: 1, H0666: 1, H0651: 1, S0404: 1, L0748: 1, L0777: 1, L0755: 1, S0434: 1, S0436: 1, L0588: 1, L0593: 1, L0601: 1, H0216: 1 and H0543: 1.

1, H0586: 1, H0253: 1, H0039: 1, H0038: 1 and S0434: 1.

352	HSVCA10	824800	362	117 - 455	1767	Glu-14 to Met-26, Leu-77 to Asn-88, Lys-96 to Gly-104.	AR055: 7, AR052: 4, AR060: 4, AR061: 4, AR039: 4, AR053: 4, AR033: 3, AR096: 3, AR089: 2, AR104: 1 H0309: 1	44-64
353	HDFQA53	825910	363	91 - 459	1768	Ala-4 to Glu-13, Gln-80 to Trp-90.	AR039: 54, AR096: 22, AR033: 21, AR053: 21, AR055: 17, AR104: 15, AR089: 13, AR060: 12, AR052: 11, AR061: 9 S0474: 5, L0770: 3, L0790: 3, H0421: 2, S0422: 2, L0769: 2, L0759: 2, H0327: 1, H0566: 1, H0051: 1, S0036: 1, L3905: 1, L0803: 1, L0809: 1 and S0260: 1.	39-64, 57-79, 89-114
354	HE9PC92	827237	364	309 - 776	1769	Met-1 to Glu-6, Ser-16 to Phe-40, Glu-75 to Leu-83, Cys-86 to Lys-99, Ser-116 to Asp-124, Leu-127 to Glu-136.	AR089: 5, AR060: 5, AR061: 5, AR096: 3, AR055: 3, AR033: 2, AR104: 2, AR039: 2, AR053: 1, AR052: 1, S0046: 1, H0592: 1, H0486: 1, H0013: 1, H0581: 1, L0809: 1 and H0144: 1.	39-73
355	HMSOU92	827837	365	261 - 653	1770	Ser-42 to Ser-47, Arg-91 to Lys-99.	AR039: 14, AR096: 13, AR089: 12, AR060: 10, AR104: 10, AR033: 8,	53-70, 7-23

356	HE8OX52	828103	366	122 - 457	1771	Cys-29 to Asp-35, Pro-63 to Pro-70.	AR052: 7, AR053: 6, AR055: 5, AR061: 4 S0426: 2 and L0596: 2. AR061: 6, AR033: 5, AR055: 5, AR060: 4, AR104: 3, AR052: 3, AR053: 3, AR089: 2, AR096: 2, AR039: 0 L0415: 1, H0619: 1, H0013: 1, H0052: 1, T0010: 1, H0591: 1, H0521: 1, S3014: 1, L0439: 1, L0596: 1 and S0242: 1.	1p36.33-1p36.11	120550, 120570, 120575, 130500, 133200, 600975	93-109
357	HDAAS81	828170	367	115 - 489	1772	Arg-16 to Glu-27, Gln-37 to Phe-44, Cys-52 to Glu-58, Leu-85 to Lys-91.	AR096: 2, AR061: 1, AR033: 1, AR060: 1, AR053: 0, AR104: 0, AR039: 0, AR089: 0, AR055: 0 L0754: 15, L0439: 14, L0666: 7, L0777: 7, S0003: 6, L0163: 4, H0553: 4, H0040: 4, L0803: 4, L0779: 4, L0755: 4, H0624: 3, S0358: 3, L0471: 3, S0426: 3, L0794: 3, L0659: 3, H0547: 3, L0602: 3, H0696: 3, L0748: 3, L0731: 3, L0757: 3, H0295: 2, S0212: 2, H0661: 2, S0376: 2,			97-124

255

H0329: 2, S0046: 2, S0132: 2, L0717: 2, H0581: 2, H0023: 2, H0428: 2, H0644: 2, L0662: 2, L0776: 2, L0663: 2, S0374: 2, L0438: 2, H0555: 2, L0744: 2, L0747: 2, S0434: 2, S0242: 2, S0194: 2, S0276: 2, S0196: 2, H0686: 1, S0040: 1, T0049: 1, H0583: 1, S0282: 1, H0255: 1, H0638: 1, S0442: 1, S0444: 1, S0360: 1, H0645: 1, H0351: 1, S0278: 1, H0497: 1, H0333: 1, H0632: 1, H0486: 1, H0013: 1, H0108: 1, H0042: 1, H0575: 1, H0004: 1, H0251: 1, H0263: 1, H0046: 1, H0457: 1, H0024: 1, H0014: 1, H0179: 1, S0214: 1, H0328: 1, L0194: 1, H0628: 1, H0090: 1, H0551: 1, T0067: 1, H0623: 1, L0564: 1, H0633: 1, S0142: 1, H0529: 1, L0369: 1, L0763: 1, L0770: 1, L0761: 1, L0372: 1, L0646: 1, L0764: 1, L0648: 1, L0768: 1, L0766: 1, L0774: 1, L0375: 1, L0651: 1,

| 358 | HUSIK57 | 828267 | 368 | 142 - 471 | 1773 | Gly-71 to Leu-84. | L0805: 1, L0653: 1, L0657: 1, L0789: 1, L0665: 1, H0144: 1, L0565: 1, H0519: 1, H0689: 1, H0682: 1, H0672: 1, S0330: 1, S0152: 1, H0521: 1, H0704: 1, S3014: 1, L0750: 1, L0758: 1, S0260: 1, H0595: 1, S0436: 1, L0591: 1, S0011: 1, H0667: 1, S0192: 1 and H0506: 1. | AR052: 8, AR053: 7, AR033: 7, AR055: 5, AR089: 4, AR060: 4, AR096: 3, AR061: 3, AR039: 3, AR104: 2 L0779: 15, L0775: 9, L0758: 9, L0770: 7, L0769: 6, L0740: 5, L0754: 5, L0757: 5, S0408: 4, L0766: 4, L0789: 4, L0777: 4, L0759: 4, L0601: 4, H0224: 3, L0771: 3, L0776: 3, L0747: 3, L0752: 3, L0755: 3, H0549: 2, H0196: 2, H0083: 2, S0150: 2, L0763: 2, L0764: 2, L0787: 2, H0660: 2, L0750: 2, L0780: 2, H0170: 1, H0685: 1, S0040: 1, H0657: 1, H0638: | | | 40-71, 83-99, 32-48 |

257

359	HPRBB67	828597	369	100 - 903	1774	Asp-50 to Ile-64, Gln-66 to Asp-71, Thr-177 to Ser-183, Arg-246 to Thr-263.	
						1, S0418: 1, S0356: 1, S0358: 1, H0329: 1, S0278: 1, H0550: 1, S0222: 1, H0586: 1, L0622: 1, L0021: 1, H0390: 1, L0471: 1, S0050: 1, H0014: 1, H0594: 1, H0266: 1, H0188: 1, H0615: 1, H0038: 1, H0272: 1, H0412: 1, H0560: 1, S0144: 1, L0772: 1, L0646: 1, L0773: 1, L0768: 1, L0774: 1, L0653: 1, L0655: 1, L0515: 1, L0526: 1, L0783: 1, L0383: 1, H0520: 1, H0648: 1, S0152: 1, S0190: 1, L0742: 1, L0746: 1, L0756: 1, H0542: 1 and H0352: 1.	
						AR055: 14, AR060: 9, AR052: 7, AR104: 5, AR096: 5, AR033: 5, AR089: 5, AR053: 4, AR061: 3, AR039: 2 L0794: 7, L0804: 5, L0747: 5, L0800: 4, L0803: 4, S0003: 3, L0752: 3, L0758: 3, H0638: 2, H0169: 2, L0770: 2, L0769: 2, L0774: 2, H0436: 2, L0748: 2, L0439: 2, L0750: 2,	193-209, 152-168, 117-133

360	HPIBM51	828682	370	177 - 617	1775	Glu-42 to Ser-53.	L0777: 2, H0265: 1, H0305: 1, S0356: 1, H0013: 1, H0318: 1, H0052: 1, H0309: 1, H0597: 1, L0471: 1, H0032: 1, L0455: 1, T0042: 1, S0142: 1, L0638: 1, L0768: 1, L0775: 1, L0651: 1, L0809: 1, L0788: 1, S0053: 1, S0216: 1, H0144: 1, S0328: 1, H0521: 1, H0523: 1, S0146: 1, H0478: 1, L0780: 1 and L0608: 1.	AR055: 10, AR061: 9, AR060: 6, AR033: 5, AR052: 5, AR089: 4, AR053: 3, AR039: 2, AR096: 1, AR104: 1 H0583: 1, H0415: 1 and S0150: 1.	91-108
361	HLYFY81	828777	371	143 - 919	1776		AR033: 15, AR039: 13, AR055: 13, AR053: 12, AR096: 11, AR089: 11, AR052: 11, AR061: 10, AR104: 9, AR060: 8 L0770: 4, L0748: 3, L0750: 3, H0622: 2, H0169: 2, L0769: 2, L0766: 2, L0775: 2, L0806: 2, L0776: 2, H0436: 2, L0741: 2,		227-258

| 362 | HDPLO68 | 828826 | 372 | 398 - 730 | 1777 | Glu-22 to Lys-27, Glu-39 to Asn-44, Met-55 to Ser-60, Leu-71 to Gln-80. | L0740: 2, H0445: 2, H0556: 1, S0114: 1, H0657: 1, S0001: 1, H0255: 1, H0638: 1, S0444: 1, S0046: 1, H0231: 1, H0530: 1, H0546: 1, H0545: 1, H0123: 1, H0012: 1, H0051: 1, H0594: 1, H0039: 1, H0424: 1, H0617: 1, H0560: 1, H0366: 1, H0652: 1, L0369: 1, L0772: 1, L0773: 1, L0662: 1, L0387: 1, L0649: 1, L0783: 1, L0665: 1, S0152: 1, S3012: 1, L0777: 1, L0757: 1, L0758: 1 and H0506: 1. | 83-109 | | |
| 363 | HHEUU25 | 828922 | 373 | 174 - 1403 | 1778 | Met-1 to Ser-9. | AR104: 2, AR039: 1, AR096: 1, AR033: 1, AR055: 1, AR060: 1, AR061: 0, AR089: 0, AR053: 0, AR052: 0 S0002: 2, H0431:1, S0003: 1, H0644: 1, H0521: 1, S0044: 1, S0146: 1 and S0028: 1. AR053: 81, AR052: 72, AR033: 37, AR089: 34, AR096: 20, AR055: 14, AR060: 12, AR039: 11, | 1p32-p34 | 120950, 120960, 130500, 133200, | 305-321 |

364	HNTBH70	828926	374	49 - 522	1779	Gly-101 to Tyr-110.			81-99
						AR096: 2, AR089: 2, AR033: 1, AR039: 1, AR061: 1, AR052: 1, AR060: 1, AR055: 0, AR053: 0, AR104: 0 S0414: 8, L0754: 7, L0766: 6, L0758: 5, L0794: 3, L0592: 3, S0007: 2, L0471: 2, H0032: 2, H0038: 2, L0659: 2, H0710: 2,	AR104: 9, AR061: 9 H0046: 6, L0794: 4, H0547: 4, L0439: 3, L0779: 3, H0543: 3, L0454: 2, L0768: 2, L0663: 2, L0665: 2, L0749: 2, L0777: 2, H0716: 1, H0657: 1, H0662: 1, S0278: 1, T0039: 1, H0013: 1, H0052: 1, L0471: 1, H0591: 1, H0264: 1, S0440: 1, S0150: 1, S0002: 1, L0369: 1, L0640: 1, L0770: 1, L0662: 1, L0766: 1, L0803: 1, L0804: 1, L0378: 1, L0806: 1, L0666: 1, H0519: 1, H0539: 1, H0521: 1, S0176: 1, H0555: 1, L0747: 1, L0755: 1, L0731: 1, L0758: 1, L0362: 1 and S0424: 1.	138140, 168360, 171760, 171760, 176100, 176100, 178300, 187040, 230000, 255800, 600101, 600650, 600650, 600722, 600722	

| 365 | HMIAN37 | 828988 | 375 | 55 - 1137 | 1780 | Asp-42 to Lys-57. | L0745: 2, L0756: 2, H0624: 1, H0171: 1, S0278: 1, H0389: 1, H0431: 1, H0632: 1, H0156: 1, L0157: 1, H0510: 1, H0416: 1, S0336: 1, S0003: 1, H0428: 1, H0553: 1, H0169: 1, H0212: 1, H0040: 1, H0634: 1, L0638: 1, L0662: 1, L0803: 1, L0804: 1, L0650: 1, L0774: 1, L0776: 1, L0655: 1, L0809: 1, L0791: 1, S0052: 1, H0519: 1, L0355: 1, H0696: 1, H0436: 1, H0478: 1, L0779: 1, L0755: 1, S0436: 1 and H0543: 1. AR061: 3, AR033: 2, AR089: 2, AR060: 2, AR096: 1, AR052: 1, AR055: 1, AR104: 1, AR053: 1, AR039: 0 S0414: 26, L0777: 8, L0758: 8, L0439: 5, L0779: 5, L0752: 4, L0471: 3, H0266: 3, H0032: 3, S0422: 3, L0766: 3, L0803: 3, L0809: 3, S0380: 3, L0740: 3, L0731: 3, S0192: 3, H0170: 2, H0657: 2, S0358: 2, S6016: 2, H0574: 2, | 15-31, 172-190 |

H0052: 2, H0009: 2, H0051: 2, S6028: 2, H0090: 2, H0591: 2, S0440: 2, L0653: 2, L0666: 2, L0663: 2, H0689: 2, H0658: 2, L0745: 2, L0747: 2, L0750: 2, L0753: 2, H0423: 2, S0412: 2, H0171: 1, H0656: 1, S0360: 1, S0408: 1, H0728: 1, L0717: 1, H0351: 1, H0411: 1, S0222: 1, H0392: 1, H0455: 1, H0587: 1, T0114: 1, S0474: 1, H0309: 1, H0263: 1, H0596: 1, H0046: 1, H0083: 1, S0022: 1, H0615: 1, H0428: 1, H0553: 1, H0628: 1, H0212: 1, H0068: 1, S0036: 1, H0268: 1, H0623: 1, T0069: 1, H0494: 1, S0438: 1, H0633: 1, H0529: 1, L0637: 1, L0764: 1, L0771: 1, L0794: 1, L0388: 1, L0804: 1, L0774: 1, L0805: 1, L0607: 1, L0659: 1, L0636: 1, L0647: 1, L0790: 1, L0664: 1, L0665: 1, S0374: 1, L0438: 1, H0519: 1, S0328: 1, S0378: 1, H0518: 1, S0152: 1, H0521: 1,

| 366 | HPFDI25 | 829071 | 376 | 83 - 862 | 1781 | AR033: 72, AR055: 60, AR089: 41, AR052: 40, AR053: 38, AR060: 37, AR061: 25, AR096: 11, AR104: 6, AR039: 4 L0777: 15, L0766: 7, L0776: 6, L0751: 6, L0770: 4, L0775: 4, L0806: 4, L0805: 4, L0780: 4, S0214: 3, L0769: 3, L0774: 3, L0755: 3, H0599: 2, S0003: 2, L0768: 2, L0803: 2, L0807: 2, L0788: 2, L0743: 2, L0740: 2, L0754: 2, L0756: 2, L0779: 2, L0752: 2, L0758: 2, L0591: 2, L0603: 2, H0159: 1, H0661: 1, S0045: 1, S0222: 1, L0586: 1, H0575: 1, S0010: 1, S0474: 1, H0309: 1, S0050: 1, S0051: 1, S0022: 1, H0553: 1, H0169: 1, H0591: 1, H0038: 1, H0634: 1, S0142: 1, S0422: 1, | H0696: 1, S3012: 1, L0742: 1, L0756: 1, L0759: 1, H0445: 1, S0434: 1, L0581: 1, S0011: 1, H0653: 1, H0667: 1, S0242: 1, H0422: 1 and S0042: 1. | 141-158, 1-17, 102-118 |

| 367 | HIBCN93 | 829308 | 377 | 282 - 938 | 1782 | Met-1 to Asn-12, Glu-17 to Gln-26, Thr-43 to Ser-70, Ala-72 to Lys-88, Asp-131 to Val-136, Val-183 to Asp-190, Pro-192 to Ala-203. | AR053: 2, AR052: 2, AR096: 2, AR089: 2, AR033: 1, AR104: 1, AR055: 1, AR039: 1, AR060: 1, AR061: 1 L0740: 12, L0439: 10, L0766: 7, L0769: 4, L0794: 4, L0756: 4, H0549: 3, L0768: 3, L0803: 3, L0665: 3, S0206: 3, L0750: 3, H0423: 3, S0007: 2, S0010: 2, S0346: 2, H0052: 2, H0327: 2, H0024: 2, H0051: 2, L0763: 2, L0770: 2, H0144: 2, L0758: 2, H0556: 1, L0760: 1, S6026: 1, S0300: 1, H0550: 1, S0222: 1, H0392: 1, H0331: 1, H0013: 1, H0318: 1, S0049: 1, H0194: 1, H0103: 1, H0050: 1, L0471: 1, H0620: 1, H0373: 1, S0388: 1, T0010: 1, H0399: 1, H0553: 1, H0644: 1, H0032: 1, L0369: 1, L0771: 1, L0521: 1, L0655: 1, L0783: 1, L0787: 1, S0374: 1, H0659: 1, S0152: 1, S3012: 1, L0439: 1, L0747: 1, L0750: 1, S0026: 1 and H0543: 1. | 6q21-q23.2 | 107470, 107470, 107470, 120110, 121014, 164200, 164200, 601316, 601666, 601757, 602772 | 88-106 |

368	HCUDM68	829463	378	14 - 457	1783		1p32-p31	69-86
						Asp-9 to Tyr-15, Pro-27 to Lys-48, Ser-61 to Asn-67, Asp-104 to Asn-113.		
	H0124: 1, H0068: 1, S0036: 1, H0135: 1, H0038: 1, H0616: 1, H0551: 1, T0067: 1, H0100: 1, H0560: 1, H0561: 1, L0662: 1, L0649: 1, L0774: 1, L0517: 1, L0809: 1, L0647: 1, L0789: 1, L0792: 1, L0352: 1, S0126: 1, H0539: 1, S0380: 1, H0518: 1, S0004: 1, S0044: 1, S3014: 1, L0748: 1, L0747: 1, L0686: 1, L0592: 1, S0196: 1 and H0352: 1.					AR089: 23, AR096: 19, AR052: 18, AR039: 15, AR053: 15, AR033: 14, AR060: 9, AR055: 8, AR061: 7, AR104: 6 L0748: 10, L0766: 9, L0777: 9, L0776: 7, L0749: 7, L0756: 7, H0486: 6, L0754: 6, L0662: 5, L0747: 5, H0009: 4, S0036: 4, S0210: 4, L0771: 4, L0794: 4, L0439: 4, L0779: 4, L0752: 4, S0116: 3, S0045: 3, H0550: 3, H0599: 3, H0581: 3, H0039: 3, L0770: 3, L0805: 3, L0740: 3,	120950, 120960, 138140, 178300, 180069, 180069, 180069, 187040, 201450, 248610, 600101, 600309, 600650, 600650, 600722, 600722,

266

601676,
602522

L0755: 3, L0731: 3, L0758: 3, L0599: 3, S0412: 3, S0410: 2, H0645: 2, H0369: 2, S0222: 2, H0497: 2, H0013: 2, H0251: 2, H0083: 2, H0615: 2, S0422: 2, L0631: 2, L0764: 2, L0803: 2, L0774: 2, L0775: 2, L0527: 2, L0659: 2, H0519: 2, H0711: 2, H0670: 2, H0539: 2, S0350: 2, H0436: 2, L0745: 2, L0750: 2, L0362: 2, L0600: 2, H0624: 1, H0171: 1, H0265: 1, H0556: 1, T0002: 1, H0717: 1, S6024: 1, T0049: 1, H0583: 1, H0650: 1, S0001: 1, H0662: 1, H0402: 1, H0638: 1, S0356: 1, S0376: 1, S0360: 1, H0329: 1, H0729: 1, H0728: 1, L0717: 1, H0351: 1, H0441: 1, H0455: 1, H0592: 1, H0586: 1, H0492: 1, H0485: 1, T0040: 1, H0244: 1, H0427: 1, L0022: 1, H0004: 1, S0010: 1, S0346: 1, T0048: 1, H0052: 1, H0596: 1, H0597: 1, H0046: 1, H0050: 1, L0471: 1, H0024: 1,

| 369 | HCFCU33 | 829601 | 379 | 830- 279 | 1784 | Asp-37 to Tyr-46, Asn-48 to Gly-55, Ala-58 to Gly-65, Thr-68 to Trp-81, Ser-89 to Thr-101, | H0051: 1, S6028: 1, S0003: 1, H0428: 1, T0023: 1, L0483: 1, H0169: 1, L0456: 1, H0163: 1, H0090: 1, H0038: 1, H0040: 1, T0067: 1, H0380: 1, H0433: 1, H0268: 1, T0041: 1, H0494: 1, H0561: 1, H0646: 1, S0208: 1, S0002: 1, S0426: 1, H0743: 1, H0529: 1, L0520: 1, L0763: 1, L0667: 1, L0627: 1, L0800: 1, L0378: 1, L0806: 1, L0658: 1, L0512: 1, L0542: 1, L0783: 1, L0809: 1, L0519: 1, L0788: 1, L0789: 1, L0791: 1, L0666: 1, L0663: 1, H0144: 1, H0682: 1, H0659: 1, H0672: 1, S0330: 1, H0521: 1, H0478: 1, H0626: 1, L0780: 1, L0759: 1, H0444: 1, S0434: 1, L0596: 1, L0581: 1, L0601: 1, H0668: 1, H0667: 1, S0194: 1, H0423: 1 and : 1. AR039: 4, AR053: 3, AR089: 3, AR033: 3, AR055: 3, AR096: 2, AR060: 2, AR061: 2, AR104: 1, AR052: 0 | 5q31.1 | 131400, 147061, 147575, 147575, 147575, | 108-137, 137-168 |

370	HTGCM10	829736	380	2389 - 1391	1785		
					Arg-5 to Ser-10, Ser-29 to Ser-39, Tyr-99 to Asp-104, Asp-115 to Ile-129, Gln-131 to Asp-136, Ser-208 to Ser-215, Lys-236 to Glu-247, Ser-307 to Ser-316, His-325 to Asn-331.	AR055: 8, AR052: 7, AR096: 5, AR089: 5, AR033: 5, AR060: 5, AR053: 5, AR061: 4, AR104: 3, AR039: 2, L0748: 10, L0740: 8, L0754: 7, L0770: 5, H0539: 5, L0439: 5, L0362: 5, H0641: 4, L0777: 4, L0599: 4, L0603: 4, S0444: 3, H0486: 3, L0804: 3, H0547: 3, L0749: 3, L0750: 3, H0663: 2, S0360: 2, S0045:	
					Leu-105 to Arg-110.	H0545: 2, H0135: 2, S0342: 1, H0484: 1, S0358: 1, S0278: 1, H0550: 1, H0370: 1, H0574: 1, H0492: 1, H0599: 1, H0575: 1, H0546: 1, H0123: 1, H0050: 1, H0012: 1, H0620: 1, S0051: 1, H0100: 1, H0494: 1, S0352: 1, H0132: 1, H0130: 1, L0764: 1, L0766: 1, H0144: 1, H0519: 1, S0126: 1, H0670: 1, H0660: 1, H0696: 1, S3014: 1, L0748: 1, L0745: 1, L0756: 1, L0731: 1, H0445: 1, L0595: 1, S0196: 1 and H0422: 1.	153455, 159000, 181460, 600807, 601596, 602089
							258-274, 217-233, 182-198

269

2, H0438: 2, H0013: 2, H0599: 2, S0003: 2, L0483: 2, H0031: 2, H0591: 2, S0144: 2, L0794: 2, L0803: 2, L0654: 2, L0657: 2, L0809: 2, L0438: 2, H0521: 2, H0522: 2, S3014: 2, L0751: 2, L0731: 2, L0596: 2, L0593: 2, S0242: 2, H0624: 1, S0040: 1, S0134: 1, H0583: 1, H0657: 1, H0483: 1, H0661: 1, H0662: 1, H0402: 1, H0638: 1, S0420: 1, S0442: 1, H0580: 1, H0329: 1, H0734: 1, S0476: 1, H0549: 1, S0222: 1, H0441: 1, H0431: 1, H0587: 1, S0280: 1, H0251: 1, H0569: 1, H0012: 1, H0057: 1, H0375: 1, S0250: 1, H0428: 1, L0142: 1, H0169: 1, S0036: 1, H0038: 1, H0616: 1, H0412: 1, H0494: 1, H0625: 1, S0438: 1, S0440: 1, H0509: 1, S0150: 1, S0344: 1, S0422: 1, S0002: 1, L0763: 1, L0769: 1, L0761: 1, L0646: 1, L0773: 1, L0766: 1, L0774: 1, L0775: 1, L0805:

371	HFIIS05	830029	381	66 - 575	1786	Arg-9 to Thr-17, Lys-74 to Arg-89, Arg-135 to Glu-143, Ser-164 to Thr-170.	AR052: 8, AR096: 7, AR033: 7, AR104: 5, AR053: 5, AR089: 4, AR060: 4, AR055: 4, AR061: 3, AR039: 3 H0556: 11, H0046: 7, H0617: 6, L0750: 6, L0769: 5, L0766: 5, L0759: 5, S0434: 5, H0265: 3, H0584: 3, S0358: 3, S0360: 3, H0266: 3, L0770: 3, L0771: 3, L0439: 3, L0749: 3, H0543: 3, H0657: 2, H0484: 2, S0420: 2, S0007: 2, H0497: 2, H0623: 2, H0494: 2, S0440: 2, L0763: 2, L0764: 2, L0666: 2, H0144: 2, S0328: 2, S0330: 2, S0406: 2, L0751: 2, L0754:	102-118, 54-70
						1, L0653: 1, L0776: 1, L0636: 1, L0792: 1, L0666: 1, H0520: 1, H0519: 1, H0593: 1, S0126: 1, H0659: 1, H0658: 1, H0710: 1, H0436: 1, S0027: 1, L0744: 1, L0747: 1, L0780: 1, L0752: 1, L0755: 1, L0758: 1, L0759: 1, S0436: 1, L0591: 1, L0592: 1 and S0276: 1.		

2, L0747: 2, L0592: 2, S0026: 2, T0002: 1, H0686: 1, H0713: 1, H0294: 1, T0049: 1, H0341: 1, H0664: 1, H0228: 1, H0402: 1, H0638: 1, S0418: 1, S0408: 1, S0046: 1, L0717: 1, H0370: 1, H0392: 1, H0333: 1, H0492: 1, H0486: 1, T0060: 1, H0069: 1, H0427: 1, H0575: 1, H0036: 1, T0001: 1, H0196: 1, H0251: 1, T0115: 1, H0545: 1, L0157: 1, H0012: 1, H0350: 1, H0328: 1, T0006: 1, H0604: 1, H0628: 1, H0181: 1, L0055: 1, H0135: 1, H0616: 1, H0413: 1, T0042: 1, H0560: 1, H0359: 1, H0561: 1, H0529: 1, L0762: 1, L0761: 1, L0372: 1, L0646: 1, L0641: 1, L0648: 1, L0768: 1, L0774: 1, L0775: 1, L0806: 1, L0653: 1, L0809: 1, H0547: 1, H0539: 1, H0521: 1, H0555: 1, S0037: 1, S0206: 1, L0745: 1, L0753: 1, L0755: 1, H0445: 1, S0194: 1 and S0276: 1.

372	H2CBH25	830128	382	150 - 770	1787		AR052: 48, AR033: 27, AR104: 25, AR061: 24, AR060: 23, AR096: 18, AR053: 18, AR089: 15, AR055: 13, AR039: 4 T0110: 1, H0032: 1, H0212: 1, H0090: 1 and H0494: 1.	96-114, 5-21
373	HWLFQ55	830262	383	5 - 631	1788	Lys-4 to Glu-11.	AR089: 20, AR096: 9, AR052: 8, AR053: 6, AR060: 5, AR033: 4, AR039: 3, AR055: 3, AR104: 3, AR061: 2 S0354: 3, H0050: 1, L0483: 1 and H0670: 1.	28-59, 86-102
374	HWLBK80	830339	384	231 - 548	1789		AR096: 9, AR104: 9, AR033: 7, AR089: 6, AR039: 5, AR060: 5, AR053: 4, AR052: 4, AR061: 2, AR055: 2 S0374: 2	76-92, 53-69
375	HWHQR45	830348	385	75 - 911	1790	Ile-72 to Asn-77, Asp-98 to Gly-104.	AR033: 5, AR053: 5, AR052: 4, AR055: 4, AR089: 3, AR061: 2, AR060: 2, AR096: 1, AR104: 0, AR039: 0 H0663: 1, H0586: 1, H0587: 1, H0039: 1, S0440: 1 and L0771: 1.	10-30, 41-57, 171-187, 194-210

376	HTTDO45	830542	386	447 - 1637	1791			18	376-392, 278-294, 246-262
						Leu-184 to Trp-190, Val-208 to Met-217, Glu-221 to Thr-228, Val-238 to Gly-243, Asp-266 to Asn-272, Arg-370 to Lys-375.	AR060: 13, AR061: 11, AR089: 6, AR033: 5, AR104: 4, AR053: 4, AR096: 3, AR039: 3, AR055: 2, AR052: 2 L0803: 30, S0358: 13, S0360: 6, S0438: 6, L0794: 6, L0774: 6, L0805: 6, H0717: 5, S0408: 5, S0440: 5, L0769: 5, L0775: 5, L0777: 5, S0444: 4, H0510: 4, L0439: 4, L0747: 4, L0731: 4, L0757: 4, L0601: 4, S0026: 4, H0556: 3, H0509: 3, L0662: 3, L0776: 3, L0807: 3, S0406: 3, L0581: 3, L0608: 3, H0624: 2, T0002: 2, S0218: 2, S0354: 2, H0722: 2, S0007: 2, H0333: 2, H0574: 2, H0599: 2, L0471: 2, H0373: 2, H0188: 2, H0644: 2, H0040: 2, L0761: 2, L0363: 2, L0651: 2, L0659: 2, L0783: 2, L0789: 2, H0521: 2, S0028: 2, L0744: 2, L0748: 2, L0745: 2, L0749: 2, S0436: 2, L0588: 2, L0362: 2, T0049: 1, H0657: 1, H0341: 1, H0638: 1,		

377	HRGDD63	830829	387	38 - 370	1792		36-64, 76-92
					Phe-2 to His-9, Cys-16 to His-23, Val-31 to Arg-37, Pro-104 to Tyr-111.	S0442: 1, H0637: 1, H0441: 1, H0431: 1, H0586: 1, L0623: 1, H0013: 1, S0280: 1, H0575: 1, T0082: 1, H0581: 1, S0049: 1, L0033: 1, H0596: 1, L0040: 1, H0231: 1, S0362: 1, H0355: 1, H0622: 1, T0023: 1, S0366: 1, H0135: 1, H0163: 1, H0591: 1, H0551: 1, H0059: 1, L0564: 1, S0142: 1, S0344: 1, L0764: 1, L0773: 1, L0768: 1, L0766: 1, L0389: 1, L0804: 1, L0376: 1, L0527: 1, L0809: 1, L0665: 1, H0144: 1, H0723: 1, H0547: 1, H0519: 1, S0126: 1, H0672: 1, S0330: 1, H0522: 1, H0134: 1, S0037: 1, L0754: 1, L0752: 1, L0755: 1, S0031: 1, H0707: 1, H0667: 1, H0542: 1, H0543: 1 and H0008: 1. AR053: 6, AR055: 6, AR096: 6, AR039: 5, AR052: 4, AR060: 4, AR033: 4, AR089: 4, AR061: 3, AR104: 2 H0271: 21, H0179: 11,	

H0457: 8, H0584: 6, L0779: 6, H0521: 5, L0766: 4, L0776: 4, L0748: 4, L0777: 4, H0265: 3, H0585: 3, H0529: 3, L0805: 3, L0749: 3, H0556: 2, H0550: 2, H0087: 2, L0662: 2, S0052: 2, L0438: 2, S0126: 2, L0747: 2, L0752: 2, H0543: 2, H0167: 1, S0040: 1, H0294: 1, S0116: 1, H0341: 1, H0638: 1, S0360: 1, H0586: 1, H0497: 1, L0021: 1, H0231: 1, H0544: 1, H0545: 1, H0046: 1, H0123: 1, H0057: 1, H0416: 1, H0687: 1, H0290: 1, H0030: 1, L0455: 1, H0316: 1, H0135: 1, H0040: 1, H0634: 1, H0100: 1, H0560: 1, S0426: 1, L0763: 1, L0770: 1, L0769: 1, L0761: 1, L0800: 1, L0803: 1, L0378: 1, L0806: 1, L0659: 1, L0809: 1, L0663: 1, L0665: 1, S0428: 1, S0053: 1, S0216: 1, H0520: 1, H0682: 1, H0670: 1, H0518: 1, H0694: 1, H0134: 1, H0576: 1, L0754: 1, L0750: 1,

378	HTNBX62	830831	388	897 - 1235	1793	Glu-10 to Arg-21, Arg-31 to Lys-47, Val-58 to Glu-63.	L0755: 1, L0731: 1, L0758: 1, S0031: 1, S0011: 1, H0136: 1, H0423: 1 and H0422: 1. AR052: 36, AR053: 32, AR096: 24, AR089: 16, AR033: 13, AR039: 12, AR055: 12, AR060: 10, AR104: 10, AR061: 5 S0358: 9, S0380: 2, H0656: 1, S0418: 1, H0580: 1, H0587: 1, H0632: 1, H0581: 1, H0046: 1, H0024: 1, S0003: 1, T0023: 1, H0388: 1, T0067: 1, H0561: 1, H0641: 1, H0529: 1, H0651: 1, S0152: 1, H0522: 1, L0747: 1, L0779: 1, L0777: 1, L0752: 1, H0445: 1 and H0422: 1.		92-113, 72-88
379	HLICA76	831204	389	154 - 1320	1794		AR096: 3, AR053: 1, AR052: 1, AR089: 1, AR060: 1, AR033: 1, AR039: 0, AR061: 0, AR104: 0, AR055: 0 L0439: 11, L0777: 10, L0803: 9, L0794: 6, L0766: 6, L0438: 6, S0358: 4, L0764: 3, L0809: 3, L0789:	4	131-147, 185-201, 113-129

380		
HAPOA59	831307	
	390	
	354 - 935	
	1795	Phe-19 to Arg-27, Pro-46 to Phe-54, Ser-85 to Leu-91, Arg-115 to Thr-122.
		3, L0748: 3, L0740: 3, H0355: 2, L0435: 2, L0775: 2, L0530: 2, S0380: 2, L0747: 2, L0756: 2, L0758: 2, L0588: 2, L0362: 2, H0171: 1, H0556: 1, H0713: 1, H0583: 1, L0418: 1, S0282: 1, S0354: 1, S0376: 1, S0444: 1, S0360: 1, S0278: 1, T0040: 1, H0069: 1, H0120: 1, H0581: 1, H0046: 1, H0024: 1, H0510: 1, S6028: 1, H0615: 1, H0428: 1, L0483: 1, H0038: 1, H0413: 1, S0438: 1, S0426: 1, L0796: 1, L0646: 1, L0645: 1, L0767: 1, L0768: 1, L0650: 1, L0375: 1, L0776: 1, L0659: 1, L4559: 1, L0665: 1, S0374: 1, H0547: 1, H0519: 1, H0672: 1, H0710: 1, S0044: 1, S0406: 1, L0750: 1, L0779: 1, L0755: 1, L0731: 1, S0026: 1, H0216: 1, H0542: 1 and S0424: 1. AR055: 10, AR052: 9, AR060: 8, AR053: 8, AR033: 7, AR061: 7, AR096: 6, AR089: 6.
		128-144

381	HLMMX37	831314	391	112 - 450	1796	Arg-13 to Gln-20.	AR104: 4, AR039: 4 L0766: 4, L0438: 4, H0013: 3, H0575: 3, H0050: 3, H0616: 3, S0126: 3, L0439: 3, L0757: 3, L0758: 3, H0556: 2, H0341: 2, T0110: 2, H0572: 2, L0770: 2, L0803: 2, L0759: 2, S0420: 1, S0360: 1, S0408: 1, S0132: 1, H0619: 1, S6016: 1, T0109: 1, H0318: 1, H0266: 1, S0250: 1, H0615: 1, H0428: 1, H0039: 1, S0036: 1, H0135: 1, H0591: 1, H0038: 1, H0040: 1, H0056: 1, T0041: 1, H0560: 1, L0769: 1, L0637: 1, L0794: 1, L0804: 1, L0666: 1, L0664: 1, H0144: 1, H0520: 1, H0519: 1, H0648: 1, H0539: 1, S0152: 1, H0696: 1, S0406: 1, H0540: 1, L0748: 1, L0740: 1, L0747: 1, L0756: 1, L0752: 1, L0592: 1, L0581: 1, L0593: 1, L0096: 1 and H0423: 1. AR055: 10, AR033: 6, AR052: 6, AR096: 5, AR060: 5, AR053: 5,	58-79

382	HWLHW64	831475	392	115 - 990	1797	Lys-113 to Thr-119, Asp-156 to Gly-162.		
							AR061: 5, AR089: 5, AR104: 3, AR039: 2 S0192: 7, L0803: 5, L0800: 4, L0789: 4, L0758: 4, L0804: 3, L0747: 3, H0255: 2, L0764: 2, L0659: 2, L0666: 2, L0754: 2, L0779: 2, S0420: 1, L0617: 1, S0376: 1, H0550: 1, H0618: 1, H0597: 1, H0350: 1, H0266: 1, H0286: 1, H0688: 1, H0622: 1, H0616: 1, H0494: 1, L0761: 1, L0645: 1, L0774: 1, L0656: 1, L0382: 1, L0809: 1, H0684: 1, S0436: 1, L0601: 1 and H0665: 1.	AR052: 10, AR096: 7, AR053: 7, AR033: 7, AR089: 5, AR060: 5, AR104: 3, AR055: 2, AR039: 2, AR061: 2 H0031: 9, L0659: 7, S0358: 5, H0622: 5, H0494: 5, L0743: 4, S0132: 3, H0040: 3, L0800: 3, L0771: 3, S0354: 2, S0408: 2, H0014: 2, L0483: 2, L0764: 2, L0783: 2, L0438: 2, L0587: 2, L0601: 2, S0114:
								247-263, 129-145

383	HHERA41	831577	393	447 - 860	1798	Tyr-14 to Leu-27, Glu-39 to Ser-47.	AR096: 5, AR033: 4, AR053: 4, AR104: 4, AR060: 3, AR052: 3, AR055: 3, AR089: 3, AR039: 2, AR061: 2 L0758: 3, S0358: 2, H0521: 2, L0439: 2, S0114: 1, H0341: 1, S0442: 1, H0734: 1, H0411: 1, H0592: 1, S0280: 1, L0021: 1, H0263: 1, S0214: 1, S0438: 1, S0422: 1, L0764: 1, L0766: 1, L0776: 1, L0783: 1, L0809: 1, L0789: 1, L0663: 1, H0696: 1, L0748: 1, L0740: 1, L0745: 1,	1, H0661: 1, S0356: 1, S0442: 1, S0360: 1, H0592: 1, H0587: 1, H0036: 1, H0590: 1, H0024: 1, H0510: 1, H0252: 1, H0039: 1, H0553: 1, S0440: 1, L0772: 1, L0646: 1, L0374: 1, L0773: 1, L0766: 1, L0803: 1, L0804: 1, L0774: 1, L0784: 1, L0806: 1, L0653: 1, L0655: 1, S0374: 1, S0328: 1, S3012: 1, L0749: 1, L0731: 1, L0758: 1 and H0677: 1.	102-120, 69-85, 50-66

384	HFXJT43	831638	394	10 - 528	1799	Asn-2 to Gly-7, Thr-24 to Ser-29, Pro-65 to Ser-70, Ser-126 to Thr-132, Thr-161 to Leu-166.	L0777: 1, L0755: 1, L0759: 1, L0596: 1 and H0543: 1. AR055: 14, AR053: 13, AR052: 12, AR060: 12, AR033: 10, AR096: 10, AR089: 8, AR061: 7, AR104: 6, AR039: 4 H0596: 4, L0754: 4, H0521: 3, L0439: 3, H0580: 2, H0486: 2, T0010: 2, S0250: 2, H0616: 2, L0740: 2, L0759: 2, H0624: 1, H0171: 1, S0282: 1, S0046: 1, H0485: 1, H0156: 1, H0581: 1, H0051: 1, H0355: 1, S0003: 1, S0214: 1, H0111: 1, H0090: 1, H0264: 1, S0386: 1, L0766: 1, L0651: 1, S0122: 1, H0518: 1, S0152: 1, H0522: 1, L0744: 1, L0777: 1, L0731: 1, L0758: 1, S0436: 1 and S0242: 1.	107-123, 142-158
385	HE8CL14	831872	395	304 - 1671	1800	Gly-37 to Leu-43, Ala-114 to Arg-122.	AR053: 17, AR096: 15, AR052: 14, AR055: 13, AR089: 11, AR060: 10, AR033: 8, AR061: 8, AR104: 7, AR039: 3 L0754: 6, L0766: 4,	122-150, 311-340, 1-34, 46-65, 289-309, 223-243, 18-34

386	HLWFJ59	832119	396	10-1077	1801		
					Gly-22 to Arg-31, Pro-33 to Pro-40, Ala-44 to Lys-51, Ser-57 to Asp-62, Ser-68 to Lys-95.	AR033: 5, AR089: 4, AR060: 3, AR061: 2, AR096: 1, AR053: 1, AR055: 1, AR052: 0, AR104: 0, AR039: 0 L0439: 8, L0777: 8, L0666: 4, S0010: 3, H0615: 3, L0637: 3, L0659: 3, L0664: 3, H0648: 3, L0748: 3, L0731: 3, S0412: 3, S0132: 2, S0476: 2, S0222: 2, H0497: 2, H0031: 2, L0774: 2, L0665: 2, H0144: S0354: 3, L0764: 3, L0803: 3, L0748: 3, H0638: 2, H0013: 2, H0051: 2, S0002: 2, L0805: 2, L0664: 2, L0777: 2, L0731: 2, L0758: 2, L0759: 2, H0721: 2, H0624: 1, H0171: 1, H0556: 1, H0661: 1, H0486: 1, H0318: 1, H0009: 1, H0570: 1, H0594: 1, S0214: 1, H0169: 1, H0038: 1, H0616: 1, H0561: 1, L0761: 1, L0651: 1, L0790: 1, L0792: 1, H0648: 1, H0672: 1, L0439: 1, L0745: 1, L0779: 1, L0752: 1, L0596: 1, L0599: 1 and L0362: 1.	326-344, 172-188

387	HAJCQ05	832451	397	100 - 885	1802	Pro-70 to Lys-75, Leu-159 to Gln-173, Arg-227 to Glu-235.		43-62, 120-137, 98-114, 9-25, 200-216

2, L0438: 2, L0754: 2, L0757: 2, L0758: 2, S0194: 2, H0171: 1, H0265: 1, H0717: 1, S0110: 1, H0669: 1, S0358: 1, S0300: 1, H0369: 1, H0550: 1, S6016: 1, S0414: 1, H0013: 1, H0427: 1, H0599: 1, H0327: 1, H0123: 1, H0553: 1, H0628: 1, H0032: 1, H0264: 1, H0488: 1, S0438: 1, L0769: 1, L0805: 1, L0809: 1, L0663: 1, S0374: 1, S0148: 1, H0435: 1, H0659: 1, H0670: 1, S0328: 1, S0004: 1, H0696: 1, L0744: 1, L0753: 1, L0755: 1, L0759: 1, S0031: 1, S0434: 1, H0667: 1 and H0506: 1.

AR052: 8, AR039: 7, AR033: 7, AR061: 6, AR089: 6, AR096: 6, AR104: 5, AR055: 5, AR053: 4, AR060: 4 H0617: 5, S0418: 4, L0769: 4, L0751: 3, L0731: 3, H0657: 2, H0635: 2, H0618: 2, H0581: 2, H0546: 2, H0606: 2, H0561: 2, L0794: 2, L0439: 2, S0284:

| 388 | HAGHC54 | 832485 | 398 | 208 - 597 | 1803 | Ser-119 to Cys-125. | 1, H0265: 1, S0420: 1, S0358: 1, S0046: 1, H0486: 1, H0253: 1, H0318: 1, H0545: 1, H0510: 1, S0314: 1, L0483: 1, H0213: 1, H0551: 1, H0380: 1, H0647: 1, L0644: 1, L0764: 1, L0499: 1, L0655: 1, L0659: 1, L0666: 1, H0698: 1, H0547: 1, H0670: 1, H0672: 1, S3012: 1, L0754: 1, L0745: 1, L0749: 1, L0779: 1, L0758: 1, H0445: 1 and H0543: 1. | AR089: 6, AR052: 6, AR060: 6, AR033: 6, AR055: 5, AR096: 4, AR053: 3, AR061: 3, AR104: 2, AR039: 1 L0748: 8, S0346: 2, H0144: 2, L0754: 2, H0656: 1, S0358: 1, S0408: 1, H0331: 1, H0620: 1, L0805: 1, L0531: 1, H0682: 1 and S0424: 1. | | 45-65, 99-118 |
| 389 | HULAY53 | 832587 | 399 | 181 - 516 | 1804 | | | AR053: 3, AR033: 2, AR055: 2, AR052: 1, AR060: 1, AR061: 0, AR096: 0, AR089: 0, | 2 | 91-107, 74-90 |

285

390	HE9DLA8	832624	400	9 – 458	1805	Met-1 to Gly-7.	AR039: 0, AR104: 0 AR096: 170, AR052: 156, AR089: 119, AR060: 98, AR053: 72, AR039: 53, AR104: 47, AR033: 42, AR061: 39, AR055: 14 H0144: 2	95-113, 24-40
391	HFKEH50	833067	401	323 – 1603	1806	Ser-107 to Gly-115, Cys-202 to Thr-214, Glu-241 to Gly-248, Thr-265 to Leu-276, Gly-298 to Gly-305, Ala-382 to Gly-389, Thr-402 to Gly-414.	AR089: 3, AR060: 1, AR053: 1, AR033: 1, AR039: 0, AR104: 0, AR096: 0, AR052: 0, AR061: 0, AR055: 0 L0439: 8, L0751: 6, L0747: 6, L0665: 5, L0438: 4, L0779: 4, H0012: 3, L0748: 3, H0620: 2, H0594: 2, H0424: 2, H0553: 2, S0144: 2, L0769: 2, L0771: 2, L0809: 2, H0144: 2, H0593: 2, S0027: 2, L0777: 2, L0758: 2, L0587: 2, H0422: 2, H0171: 1, H0664: 1, H0619: 1, S0222: 1, H0492: 1, H0618: 1, H0581: 1, H0052: 1, H0150: 1, H0024: 1, S0388: 1, S0364: 1, H0135: 1, H0040: 1, L0640: 1, L0761: 1, L0372:	83-103, 223-239

| 392 | HUSXK49 | 834541 | 402 | 966 - 475 | 1807 | Asn-34 to Arg-43, Arg-96 to Phe-102, Phe-106 to Gly-121, Gln-153 to Thr-158. | 1, L0773: 1, L0648: 1, L0662: 1, L0766: 1, L0774: 1, L0629: 1, L0666: 1, L0664: 1, H0658: 1, H0521: 1, S3014: 1 and H0543: 1. AR039: 24, AR053: 17, AR052: 17, AR033: 16, AR055: 14, AR089: 13, AR096: 12, AR104: 9, AR060: 9, AR061: 7 L0758: 4, H0014: 1, S0051: 1, H0038: 1, H0413: 1, H0529: 1, L0770: 1, L0769: 1, L0794: 1 and L0752: 1. | 52-69, 77-93 |
| 393 | HTSFU12 | 834610 | 403 | 73 - 420 | 1808 | Arg-8 to Glu-15, Gln-38 to Gln-43, Thr-50 to Arg-68, Gln-95 to Gln-106. | AR055: 11, AR061: 7, AR096: 7, AR089: 6, AR060: 6, AR052: 6, AR033: 6, AR053: 5, AR039: 1, AR104: 0 L0761: 7, L0747: 6, S0045: 4, L0766: 4, L0755: 4, L0770: 3, S0126: 3, L0731: 3, H0657: 2, H0730: 2, L0623: 2, H0546: 2, H0150: 2, H0012: 2, H0620: 2, H0529: 2, H0739: 1, S6024: 1, T0049: 1, H0381: 1, H0663: 1, H0306: 1, | 65-99 |

394	HELHM15	834810	404	978 - 394	1809		54-78
		o			Pro-12 to Thr-38, Tyr-86 to Trp-92, Glu-142 to Trp-150.	H0549: 1, S0222: 1, H0586: 1, H0333: 1, H0486: 1, H0599: 1, T0048: 1, H0597: 1, H0544: 1, H0545: 1, H0567: 1, H0571: 1, H0083: 1, H0428: 1, T0006: 1, L0142: 1, H0617: 1, L0055: 1, S0036: 1, H0087: 1, H0412: 1, T0041: 1, S0438: 1, L0763: 1, L5565: 1, L0372: 1, L0803: 1, L0806: 1, L0805: 1, L0776: 1, L0783: 1, L0383: 1, S0296: 1, S0380: 1, H0710: 1, H0528: 1, S0406: 1, H0576: 1, H0631: 1, L0611: 1, S0027: 1, L0757: 1, L0758: 1, L0588: 1, H0423: 1 and H0506: 1. AR055: 15, AR039: 10, AR096: 9, AR089: 8, AR033: 8, AR053: 8, AR052: 7, AR060: 7, AR061: 6, AR104: 6, L0439: 5, L0747: 5, L0731: 4, L0499: 2, L0774: 2, L0805: 2, L0665: 2, L0438: 2, L0743: 2, L0744: 2, L0757: 2, L0759: 2, H0556: 1, H0713: 1, H0583: 1.	

395	HTEJP13	834931	405	665 - 1147	1810	Pro-17 to Pro-23, Arg-40 to Tyr-50, Arg-143 to Ala-154.	AR053: 23, AR052: 20, AR096: 18, AR055: 16, AR060: 13, AR089: 13, AR104: 9, AR061: 9, AR033: 9, AR039: 7 H0616: 3, L0758: 3, L0717: 1, H0038: 1 and L0779: 1. 1, S0045: 1, H0587: 1, H0486: 1, H0599: 1, H0581: 1, H0530: 1, H0544: 1, H0163: 1, H0090: 1, H0100: 1, L0770: 1, L5566: 1, L0364: 1, L0649: 1, L0803: 1, L0659: 1, L0809: 1, L0789: 1, L0352: 1, S0380: 1, L0749: 1, L0750: 1, L0758: 1, L0581: 1 and H0667: 1.		65-102, 85-102
396	HDQHB46	835271	406	174 - 698	1811	Asp-9 to Asn-21, Pro-24 to Ser-38, Thr-54 to Tyr-61, Asp-126 to Asn-131, Asp-133 to Asp-138, Cys-167 to Ile-175.	AR096: 5, AR089: 3, AR053: 2, AR039: 2, AR061: 1, AR104: 0 AR052: 3, AR033: 2, AR060: 2, AR055: 1, AR104: 0 H0641: 10, H0521: 10, H0575: 6, L0599: 6, H0638: 4, H0435: 3, L0758: 3, L0600: 3, H0616: 2, H0413: 2, H0423: 2, T0049: 1,	3	136-162

397	HCETE50	835488	407	158 - 595	1812		H0657: 1, H0580: 1, H0486: 1, H0042: 1, H0123: 1, H0375: 1, H0031: 1, H0038: 1, H0412: 1, H0652: 1, L0648: 1, L0794: 1, L0776: 1, L0787: 1, H0518: 1, H0522: 1 and H0707: 1.	101-134, 22-38, 124-140, 49-65
398	HDTBO48	835717	408	123 - 896	1813		AR033: 8, AR055: 2, AR039: 2, AR061: 2, AR089: 2, AR060: 1, AR096: 1, AR104: 1, AR052: 0, AR053: 0, L0439: 25, L0438: 5, L0742: 5, S0010: 4, S0412: 2, S0222: 1, H0592: 1, H0013: 1, H0156: 1, H0194: 1, H0178: 1, H0024: 1, S0051: 1, T0010: 1, L0455: 1, S0036: 1, L0371: 1, L0794: 1, L0809: 1, H0547: 1, H0539: 1 and L0786: 1.	180-214
399	HODGL01	835896	409	813 - 172	1814	Trp-6 to Ala-14, Ala-33 to Gly-43,	AR053: 67, AR052: 49, AR096: 48, AR089: 35, AR039: 25, AR060: 22, AR104: 20, AR033: 16, AR055: 8, AR061: 6, H0486: 2 AR055: 5, AR053: 4, AR060: 3, AR061: 3,	154-190, 123-141

| Trp-68 to His-73. | AR033: 3, AR052: 3, AR089: 3, AR039: 3, AR096: 2, AR104: 1 H0250: 9, H0271: 7, L0743: 6, L0751: 6, L0745: 6, S0360: 5, H0265: 4, L0666: 4, H0521: 4, H0556: 3, H0716: 3, S0280: 3, L0662: 3, H0713: 2, H0662: 2, S0278: 2, H0486: 2, H0615: 2, L0805: 2, L0655: 2, L0664: 2, H0672: 2, S0378: 2, L0746: 2, S0434: 2, L0581: 2, S0196: 2, H0650: 1, H0656: 1, S0116: 1, S0420: 1, S0444: 1, H0580: 1, H0619: 1, S6022: 1, H0635: 1, H0427: 1, L0021: 1, H0253: 1, S0474: 1, H0457: 1, H0355: 1, S0334: 1, H0286: 1, S0312: 1, H0252: 1, H0032: 1, H0634: 1, H0063: 1, H0551: 1, S0440: 1, H0649: 1, L0771: 1, L0649: 1, L0803: 1, L0774: 1, L0806: 1, L0636: 1, L0791: 1, L0793: 1, L0665: 1, H0690: 1, H0670: 1, H0660: 1, H0648: 1, H0518: 1, S0174: 1, |

| 400 | HE8TO35 | 835965 | 410 | 1710 - 2150 | 1815 | Pro-45 to Gln-55. | H0555: 1, H0436: 1, S0032: 1, L0744: 1, H0343: 1, L0584: 1, S0242: 1, H0422: 1 and H0506: 1. AR061: 3, AR096: 2, AR055: 2, AR060: 2, AR104: 2, AR033: 1, AR053: 1, AR089: 1, AR052: 1, AR039: 0 H0046: 2, H0009: 2, H0090: 2, H0494: 2, L0438: 2, H0547: 2, H0521: 2, L0439: 2, L0777: 2, H0543: 2, H0556: 1, S0342: 1, S0045: 1, H0619: 1, H0632: 1, H0013: 1, H0156: 1, L0021: 1, H0575: 1, H0318: 1, S0003: 1, L0483: 1, H0628: 1, H0623: 1, H0561: 1, L0761: 1, L0803: 1, L0804: 1, L0659: 1, L0382: 1, H0144: 1, H0539: 1, S0152: 1, H0478: 1, H0631: 1, L0741: 1, L0740: 1 and L0591: 1. | 117-133, 90-106 |
| 401 | HOHCB06 | 836191 | 411 | 17 - 619 | 1816 | | AR096: 1, AR052: 1, AR061: 1, AR055: 1, AR039: 1, AR104: 1, AR089: 1, AR053: 0, | 143-176 |

292

AR060: 0, AR033: 0, L0744: 8, L0777: 8, L0749: 6, S0126: 4, S0358: 3, H0622: 3, L0805: 3, H0519: 3, H0624: 2, S0476: 2, L0717: 2, H0486: 2, H0012: 2, S0250: 2, L0662: 2, L0803: 2, L0659: 2, L0519: 2, L0663: 2, L0438: 2, H0520: 2, H0435: 2, L0751: 2, L0747: 2, L0759: 2, H0685: 1, S0212: 1, S0442: 1, H0729: 1, H0550: 1, H0013: 1, S0280: 1, H0599: 1, H0575: 1, H0123: 1, L0471: 1, H0057: 1, H0266: 1, H0687: 1, H0292: 1, H0688: 1, H0030: 1, H0644: 1, T0041: 1, L0770: 1, L0771: 1, L0768: 1, L0774: 1, L0655: 1, L0661: 1, L0665: 1, H0724: 1, H0547: 1, S0330: 1, H0539: 1, H0518: 1, S0152: 1, H0555: 1, S0390: 1, L0748: 1, L0439: 1, L0740: 1, L0779: 1, L0755: 1, L0731: 1, H0595: 1, L0591: 1, L0593: 1, S0192: 1 and S0196: 1.

| 402 | H2CBN10 | 836762 | 412 | 173 - 1075 | 1817 | Arg-195 to Phe-203, Ser-258 to Thr-264. | AR033: 380, AR061: 335, AR060: 243, AR104: 243, AR055: 238, AR096: 231, AR089: 178, AR053: 132, AR052: 131, AR039: 122 L0750: 2, H0580: 1, S0010: 1, T0110: 1, H0457: 1, H0436: 1, L0779: 1, L0752: 1 and H0543: 1. | 116-138, 202-226, 49-67, 148-166, 270-286, 174-190, 99-115, 22-38, 1-17, 78-94 |
| 403 | HBJNB08 | 836997 | 413 | 130 - 1266 | 1818 | Tyr-20 to Asn-26, Ala-37 to Ser-46, Thr-99 to Glu-105, Cys-163 to Arg-171, Tyr-204 to Leu-215, His-279 to Phe-285, Ala-334 to Ala-349, Ala-363 to Gly-379. | AR033: 2, AR053: 2, AR089: 2, AR060: 2, AR052: 1, AR096: 1, AR039: 1, AR061: 1, AR055: 0 L0750: 8, H0318: 6, L0764: 6, S0002: 5, L0771: 5, L0665: 5, L0438: 5, L0747: 5, S0442: 4, H0046: 4, L0655: 4, L0809: 4, L0666: 4, L0740: 4, S0356: 3, S0444: 3, H0486: 3, L0646: 3, L0794: 3, L0766: 3, S0360: 2, H0036: 2, S0426: 2, L0372: 2, L0773: 2, L0776: 2, L0659: 2, L0663: 2, H0519: 2, H0555: 2, L0777: 2, S0436: 2, L0596: 2, L0591: 2, L0362: 2, H0542: 2, H0506: 2, S0212: 1, S0045: 1, H0575: | 301-328, 288-304 |

294

404	HHAMF80	837474	414	110 - 427	1819			41-57, 77-98
					Ser-3 to Gly-12, Ala-16 to Arg-28, Lys-62 to Leu-68.	1, H0590: 1, S0010: 1, S0346: 1, H0705: 1, H0581: 1, H0052: 1, T0110: 1, H0597: 1, H0239: 1, H0622: 1, H0644: 1, H0674: 1, H0163: 1, H0591: 1, H0038: 1, H0087: 1, H0100: 1, S0448: 1, S0440: 1, S0142: 1, H0529: 1, L0763: 1, L0804: 1, L0775: 1, L0651: 1, L0806: 1, L0805: 1, L0783: 1, L0790: 1, L0791: 1, L0664: 1, H0701: 1, H0593: 1, H0670: 1, H0539: 1, S0406: 1, S3012: 1, S0028: 1, L0439: 1, L0751: 1, L0755: 1, H0445: 1, S0434: 1, H0423: 1 and S0424: 1.	AR096: 1, AR089: 1, AR104: 1, AR033: 1, AR061: 1, AR060: 0, AR053: 0, AR052: 0, AR055: 0, AR039: 0 H0599: 2, L0663: 2, S0136: 2, L0740: 2, S0418: 1, H0550: 1, H0592: 1, H0587: 1, H0373: 1, H0090: 1, S0422: 1, L0763: 1, S0052: 1, S0013: 1, H0696: 1	

405	HDPUR66	837522	415	199 - 771	1820	Gly-10 to Phe-18, Gly-28 to Asp-40.	1, L0749: 1, L0779: 1 and L0485: 1. AR060: 12, AR096: 7, AR039: 5, AR053: 4, AR052: 3, AR033: 3, AR055: 3, AR089: 3, AR104: 3, AR061: 2 S6022: 1, H0486: 1, H0560: 1, L0565: 1 and H0521: 1.		124-143
406	HBWBX66	837523	416	183 - 656	1821	Gln-10 to Arg-16, Leu-31 to Thr-38, Val-49 to Arg-55, Cys-77 to Ser-82, Ser-102 to Ala-107.	AR089: 1, AR033: 1, AR061: 0, AR055: 0, AR060: 0, AR104: 1, AR039: 0, AR096: 0, AR052: 0 S0386: 2, S0420: 1, H0013: 1, H0457: 1, S0250: 1, S0390: 1, L0596: 1 and H0422: 1.		58-74
407	HMHBR95	837526	417	22 - 531	1822	Leu-14 to Asp-19, Gly-47 to Trp-55, Ser-102 to Ser-107, Asp-136 to Cys-143.	AR104: 6, AR061: 2, AR096: 2, AR060: 1, AR053: 1, AR089: 1, AR033: 0, AR055: 0, AR052: 0 L0745: 12, L0771: 7, L0766: 3, L0746: 3, L0777: 3, L0764: 2, L0775: 2, L0779: 2, L0757: 2, L0404: 1, S0360: 1, H0351: 1,		26-42, 55-71, 145-161, 110-126

408	HEGAU68	837527	418	5 - 388	1823		82-99
					Gly-24 to Gly-29, Thr-36 to Asp-41, Ala-47 to Pro-52.	AR089: 11, AR060: 8, AR096: 8, AR033: 6, AR052: 4, AR053: 4, AR039: 4, AR104: 4, AR055: 3, AR061: 3 L0744: 9, L0731: 8, L0439: 7, H0144: 5, L0749: 5, L0748: 4, L0745: 4, L0758: 4, S0040: 3, H0013: 3, H0038: 3, S0344: 3, L0769: 3, L0773: 3, L0755: 3, H0306: 2, S0356: 2, S0358: 2, H0550: 2, H0392: 2, S0280: 2, H0620: 2, T0003: 2, H0598: 2, S0036: 2, H0623: 2, S0002: 2, L0662: 2, L0768: 2, L0561: 2, L0775: 2, L0776: 2, L0527: 2, L0783: 2, L0438: 2, S0126: 2, H0539: 2, S0152: 2, H0521: 2, S3014: 2, L0754: 2, L0747: 2,	H0441: 1, H0069: 1, H0052: 1, H0288: 1, H0286: 1, S0364: 1, H0634: 1, H0264: 1, H0494: 1, H0646: 1, L0772: 1, L0372: 1, L0800: 1, L0803: 1, L0774: 1, L0806: 1, L0788: 1 and H0672: 1.

L0780: 2, L0752: 2, L0757: 2, L0591: 2, L0608: 2, L0362: 2, L0361: 2, L0601: 2, L0603: 2, H0170: 1, H0265: 1, H0556: 1, T0002: 1, S0114: 1, L0427: 1, S0116: 1, S0282: 1, H0402: 1, S0420: 1, S0354: 1, S0376: 1, S0360: 1, H0208: 1, S0045: 1, S0132: 1, S0476: 1, S0278: 1, H0549: 1, S0222: 1, S6014: 1, H0441: 1, H0438: 1, H0497: 1, H0333: 1, H0069: 1, L0021: 1, H0618: 1, S0010: 1, H0421: 1, H0251: 1, H0085: 1, H0327: 1, H0150: 1, H0178: 1, H0050: 1, H0024: 1, H0051: 1, H0375: 1, H0594: 1, H0188: 1, H0687: 1, S0022: 1, H0252: 1, H0615: 1, H0428: 1, H0622: 1, H0031: 1, H0644: 1, H0673: 1, H0674: 1, H0135: 1, H0163: 1, H0634: 1, H0087: 1, H0412: 1, H0056: 1, S0038: 1, H0100: 1, T0041: 1, H0429: 1, S0450: 1, S0142: 1, S0426: 1, H0529: 1, L0763: 1,

409	HMEAD61	837597	419	107 - 1093	1824	Phe-80 to Gly-85, Glu-148 to Trp-157.	L0770: 1, L0796: 1, L0761: 1, L0667: 1, L0646: 1, L0764: 1, L0771: 1, L0766: 1, L0375: 1, L0655: 1, L0657: 1, L0659: 1, L0517: 1, L0383: 1, L0382: 1, L0543: 1, L0666: 1, L0664: 1, H0703: 1, S0374: 1, H0520: 1, H0519: 1, H0689: 1, H0682: 1, H0659: 1, H0658: 1, S0328: 1, S0404: 1, S0406: 1, S0027: 1, L0740: 1, L0746: 1, L0750: 1, L0759: 1, H0445: 1, L0480: 1, L0584: 1, S0242: 1, S0276: 1, H0543: 1, H0423: 1, H0422: 1, S0446: 1, L0600: 1 and H0352: 1.	AR053: 15, AR096: 15, AR089: 12, AR052: 12, AR104: 9, AR060: 8, AR033: 7, AR039: 6, AR055: 6, AR061: 4	L0766: 5, L0439: 4, L0754: 4, L0758: 4, H0656: 3, H0031: 3, H0038: 3, H0657: 2, S0029: 2, S0222: 2, H0455: 2, H0618: 2, H0081: 2, H0617: 2, T0042: 2, S0210: 2, H0529: 2,	234-252, 18-34

| 410 | HDTDF94 | 837726 | 420 | 61 - 477 | 1825 | Pro-20 to Ser-28, Gly-59 to Leu-69, Tyr-101 to Ile-106. | L0769: 2, L0662: 2, L0665: 2, L0747: 2, L0777: 2, H0445: 2, H0543: 2, H0170: 1, H0394: 1, H0556: 1, T0002: 1, H0662: 1, S0046: 1, L0717: 1, H0392: 1, H0497: 1, H0253: 1, H0318: 1, H0544: 1, H0178: 1, L0157: 1, L0471: 1, H0051: 1, T0010: 1, H0408: 1, H0266: 1, H0188: 1, H0290: 1, S0022: 1, H0135: 1, H0090: 1, H0040: 1, H0634: 1, H0494: 1, S0448: 1, H0641: 1, S0142: 1, S0344: 1, L0770: 1, L0637: 1, L0771: 1, L0521: 1, L0768: 1, L0803: 1, L0806: 1, L0653: 1, L0776: 1, L0655: 1, L0629: 1, L0659: 1, L0791: 1, L0663: 1, L0664: 1, H0519: 1, H0682: 1, H0539: 1, H0521: 1, H0522: 1, H0134: 1, H0214: 1, L0779: 1, H0667: 1, H0542: 1, H0423: 1 and H0422: 1. AR096: 5, AR061: 4, AR039: 3, AR033: 3, AR053: 3, AR060: 3, AR055: 3, AR052: 3, | 74-97, 29-56 |

| 411 | HKAJL51 | 837785 | 421 | 22 - 351 | 1826 | Glu-2 to Ala-19, Leu-23 to Gln-40. | AR096: 2, AR055: 1, AR089: 1, AR033: 1, AR060: 1, AR052: 1, AR061: 1, AR039: 0, AR053: 0 L0754: 118, L0748: 42, H0553: 29, L0757: 15, L0755: 13, L0603: 11, H0030: 10, H0031: 10, H0644: 6, L0740: 6, L0142: 5, H0100: 5, L0731: 4, L0005: 3, H0551: 2, H0494: 2, L0439: 2, L0747: 2, L0749: 2, L0780: 2, S0242: 2, H0657: 1, S0418: 1, H0053: 1, H0036: 1, H0546: 1, L0471: 1, H0051: 1, H0328: 1, H0615: 1, L0143: 1, H0111: 1, H0413: 1, L0666: 1, L0663: 1, H0518: 1, S0332: 1, S0454: 1, H0704: 1, H0555: 1, L0756: | 71-87, 46-62 |
| | | | | | | | AR089: 2, AR104: 2 L0748: 5, H0024: 2, L0439: 2, H0662: 1, S0420: 1, S0132: 1, H0431: 1, H0586: 1, H0486: 1, H0013: 1, H0575: 1, L0518: 1, H0539: 1, H0521: 1, S0242: 1 and S0194: 1. | |

412	HODGZA7	837858	422	419 - 1024	1827	Ser-88 to Leu-95, Ser-99 to Ser-106, Pro-134 to His-140.	1, L0601: 1, S0011: 1 and H0136: 1. AR096: 3, AR061: 2, AR033: 2, AR089: 1, AR060: 1, AR052: 1, AR053: 0, AR039: 0, AR055: 0, AR104: 0 H0615: 2, H0040: 1, H0272: 1 and H0436: 1.	163-193, 21-56, 9-26, 59-77, 183-199
413	HTJMQ74	838145	423	172 - 1044	1828	Met-1 to Gly-7, Cys-47 to Arg-52, Asp-97 to His-102, Asn-280 to Met-291.	AR039: 4, AR096: 3, AR052: 3, AR053: 3, AR089: 3, AR033: 2, AR055: 2, AR061: 2, AR104: 2, AR060: 1 H0586: 6, L0777: 5, H0661: 3, S0476: 2, H0592: 2, H0587: 2, H0494: 2, S0001: 1, H0486: 1, H0013: 1, S0280: 1, H0251: 1, L0738: 1, S0214: 1, H0488: 1, L0369: 1, L0770: 1, L0637: 1, L0772: 1, L0659: 1, L0647: 1, L0666: 1, H0724: 1, H0519: 1, H0682: 1, S0027: 1, S0028: 1, S0206: 1, L0747: 1, L0755: 1 and H0595: 1.	161-190, 232-254, 111-138, 200-216, 66-82, 137-153, 26-42
414	HOHCE56	838619	424	544 - 1812	1829	Ser-4 to Asn-10, Pro-29 to Cys-38,	AR033: 1, AR096: 1, AR104: 1, AR089: 0,	75-92

Pro-64 to Thr-70, Glu-95 to Tyr-100, Lys-106 to Arg-115, Thr-139 to Ser-146, Arg-160 to Glu-166, Gly-205 to Gly-218, Ser-252 to Leu-258, Gly-278 to Thr-288, Gln-340 to Phe-350, Ser-378 to Gly-391, Gly-398 to Arg-423.	AR061: 0, AR055: 0, AR039: 0, AR060: 0, AR053: 0 L0743: 9, H0620: 8, L0754: 8, L0731: 8, L0742: 7, S0126: 6, H0486: 5, H0012: 4, S0250: 4, L0747: 4, H0051: 3, H0039: 3, L0770: 3, L0654: 3, L0780: 3, S0040: 2, H0294: 2, L0149: 2, H0586: 2, H0253: 2, H0052: 2, H0545: 2, H0050: 2, H0024: 2, H0622: 2, H0124: 2, S0036: 2, H0135: 2, S0112: 2, H0494: 2, L0662: 2, L0806: 2, L0659: 2, H0689: 2, H0435: 2, L0741: 2, L0740: 2, L0751: 2, L0779: 2, L0777: 2, L0752: 2, L0755: 2, L0366: 2, S0192: 2, H0624: 1, S6024: 1, H0295: 1, H0484: 1, S0420: 1, L0619: 1, S0356: 1, H0208: 1, S0046: 1, S0300: 1, H0351: 1, H0549: 1, H0455: 1, H0333: 1, H0575: 1, H0544: 1, H0123: 1, H0081: 1, S0050: 1, S0051: 1, H0594: 1, S0022: 1, H0551: 1,

| 415 | HLJBI45 | 838808 | 425 | 309 - 644 | 1830 | Ser-56 to Asn-61. | AR089: 20, AR052: 14, AR033: 14, AR060: 11, AR096: 9, AR053: 9, AR055: 7, AR104: 7, AR061: 5, AR039: 5, S0358: 5, H0521: 4, S0418: 3, S0126: 3, H0658: 3, L0748: 3, L0740: 2, L0750: 2, S0040: 1, H0294: 1, H0228: 1, H0393: 1, H0357: 1, H0586: 1, H0490: 1, H0486: 1, H0013: 1, H0427: 1, H0098: 1, H0575: 1, S0010: 1, T0048: 1, H0581: 1, S0049: 1, L0471: 1, H0375: 1, H0266: 1, H0328: 1, H0688: 1, H0428: 1, H0039: 1, H0169: 1, | H0059: 1, H0100: 1, S0002: 1, L0763: 1, L5575: 1, L0772: 1, L0646: 1, L0771: 1, L0803: 1, L0636: 1, L0647: 1, L0787: 1, L0793: 1, L0666: 1, L0665: 1, H0726: 1, H0547: 1, H0593: 1, S0044: 1, S0390: 1, S3014: 1, S0027: 1, S0028: 1, S0032: 1, L0750: 1, L0756: 1, L0757: 1, L0758: 1, L0592: 1 and L0603: 1. | 2p22-p21 | 120435, 120435, 126600, 135300, 136435, 152790, 152790, 1571170, 182601, 278300, 601071, 601771, 602134 | 88-107, 34-50, 61-77, 13-29 |

416	HSHCL04	838860	426	661 - 1014	1831	Arg-31 to Asn-36.	H0135: 1, H0372: 1, H0494: 1, H0560: 1, H0633: 1, S0144: 1, H0529: 1, L0654: 1, H0520: 1, H0435: 1, H0660: 1, S0330: 1, L0602: 1, L0439: 1, L0731: 1, H0668: 1, H0665: 1 and H0542: 1.	AR096: 8, AR089: 6, AR060: 5, AR052: 5, AR053: 5, AR033: 4, AR055: 4, AR039: 3, AR061: 3, AR104: 2 S0053: 2, H0171: 1 and S0037: 1.	1-24, 61-88, 53-70, 35-51
417	HAJBR52	839006	427	349 - 1170	1832	Met-1 to Gly-7, Ala-45 to Gly-53, Leu-76 to Phe-84, Lys-135 to Thr-141.		AR053: 1, AR104: 1, AR033: 1, AR060: 1, AR089: 0, AR096: 0, AR061: 0, AR052: 0, AR039: 0, AR055: 0 L0766: 7, L0758: 3, L0759: 3, H0038: 2, H0560: 2, L0804: 2, L0775: 2, L0751: 2, L0779: 2, L0595: 2, H0656: 1, S0212: 1, H0664: 1, S0354: 1, L0011: 1, H0156: 1, H0599: 1, S0346: 1, H0581: 1, H0673: 1, H0591: 1, H0413: 1,	140-158, 22-38, 237-254, 105-121, 210-226

305

418	HSLEK65	839237	428	53 - 730	1833			
					Thr-184 to Phe-190, Thr-219 to Ser-226.	AR033: 2, AR104: 1, AR055: 1, AR060: 1, AR052: 1, AR096: 1, AR089: 1, AR061: 1, AR053: 1, AR039: 0 S0278: 13, S0144: 12, S0142: 9, H0521: 8, S0222: 6, S0282: 5, H0638: 5, S0344: 5, S0028: 5, L0731: 5, S0001: 4, S0045: 3, S0049: 3, L0755: 3, S0031: 3, H0351: 2, S0051: 2, H0100: 2, S0428: 2, L0756: 2, H0624: 1, H0716: 1, H0455: 1, H0333: 1, H0575: 1, H0052: 1, H0041: 1, H0009: 1, N0006: 1, T0010: 1, H0375: 1, S6028: 1, H0416: 1, H0617: 1, H0606: 1, H0068: 1, S0036: 1, S0112: 1, S0438: 1, S0440:	H0623: 1, S0038: 1, L0370: 1, H0561: 1, S0422: 1, L0770: 1, L0772: 1, L0642: 1, L0803: 1, L0774: 1, L0656: 1, L0663: 1, S0428: 1, H0519: 1, S0330: 1, H0539: 1, H0521: 1, H0555: 1, H0576: 1, L0588: 1, L0605: 1 and H0667: 1.	1-25, 35-56, 188-210, 85-107, 155-171, 61-77

| 419 | HWGAF42 | 839272 | 429 | 315 - 650 | 1834 | Met-1 to Thr-7, Leu-24 to Glu-31, Gln-34 to Gly-44, Gly-82 to Ser-87, Asp-94 to Leu-99, Ala-102 to Glu-107. | AR033: 29, AR052: 29, AR039: 28, AR053: 26, AR104: 25, AR089: 23, AR096: 19, AR055: 18, AR060: 14, AR061: 12 L0805: 51, L0776: 33, L0439: 31, L0789: 8, L0741: 8, L0438: 7, L0769: 6, L0777: 6, H0052: 5, H0617: 5, L0748: 4, L0750: 4, L0779: 4, L0753: 4, H0424: 3, S0036: 3, L0775: 3, L0809: 3, S0378: 3, S0040: 2, L0103: 2, H0046: 2, H0284: 2, T0006: 2, H0213: 2, S0038: 2, L0351: 2, L0764: 2, L0768: 2, L0794: 2, L0659: 2, H0670: 2, L0602: 2, L0747: 2, L0731: 2, L0758: 2, S0436: 2, L0592: 2, S0342: 1, S0282: 1, S0030: 1, H0484: 1, S0007: 1, S0278: 1, | 41-68 |
| | | | | | | 1, S0002: 1, L0763: 1, L0769: 1, L0637: 1, L0806: 1, L0658: 1, L0666: 1, S0126: 1, L0355: 1, S0332: 1, H0522: 1, S0044: 1, S0390: 1, S0436: 1 and L0599: 1. | | |

307

420	HOUEA63	839547	430	375 - 1598	1835		
					Ser-10 to Asp-28, Ser-51 to Arg-85, Val-92 to Asn-97, Tyr-123 to Gly-133, Glu-138 to Lys-145, Thr-265 to Gly-276, Thr-303 to Gln-308, Leu-314 to Thr-321, Leu-331 to Thr-339, Lys-347 to Leu-354.	AR033: 5, AR055: 5, AR089: 4, AR052: 4, AR060: 4, AR096: 4, AR053: 4, AR061: 4, AR104: 2, AR039: 0 H0553: 3, H0494: 3, L0748: 3, H0457: 2, H0031: 2, H0521: 2, S0040: 1, S0218: 1, H0662: 1, S0418: 1, S0354: 1, S0045: 1, H0411: 1, H0549: 1, H0586: 1, H0497: 1, H0331: 1, H0486: 1, H0013: 1, H0036: 1, H0050: 1, S0036: 1, L0370: 1, S0002: 1, L0766:	H0261: 1, S0222: 1, H0441: 1, H0156: 1, T0082: 1, H0194: 1, H0231: 1, T0010: 1, S6028: 1, H0271: 1, L0483: 1, H0418: 1, H0181: 1, H0412: 1, S0112: 1, S0370: 1, S0144: 1, S0002: 1, L0520: 1, L0762: 1, L0763: 1, L0638: 1, L0772: 1, L0653: 1, L0636: 1, L0367: 1, L0788: 1, L0791: 1, L0665: 1, L0352: 1, H0672: 1, H0539: 1, S0032: 1, L0742: 1, L0740: 1 and H0667: 1.	177-193

421	HLWAW3 6	839561	431	213 - 1133	1836		15q26.1	166800, 210900	241-268
						Ala-4 to Asn-18, Leu-69 to Gln-75, Asp-114 to Pro-119, Ala-153 to Arg-162, Glu-166 to Glu-202, Ala-209 to Ser-244.			

1, L0375: 1, H0144: 1, H0659: 1, S0027: 1, L0745: 1, L0599: 1, L0604: 1, H0543: 1 and S0424: 1.

AR096: 3, AR033: 2, AR061: 2, AR089: 2, AR053: 2, AR052: 2, AR039: 1, AR055: 1, AR060: 1, AR104: 1

L0748: 15, L0439: 10, H0046: 9, L0758: 8, L0596: 7, L0589: 7, H0013: 6, L0769: 6, L0666: 6, H0556: 5, H0341: 5, S0420: 5, L0766: 5, L0659: 5, H0521: 5, H0575: 4, H0083: 4, H0266: 4, H0553: 4, H0032: 4, H0551: 4, L0771: 4, L0775: 4, L0665: 4, H0518: 4, S0152: 4, L0740: 4, L0751: 4, H0170: 3, H0265: 3, H0657: 3, H0656: 3, S0418: 3, S0358: 3, S0476: 3, H0687: 3, H0628: 3, H0617: 3, H0090: 3, S0150: 3, L0646: 3, L0768: 3, L0776: 3, L0809: 3, L0664: 3, H0144: 3, H0547: 3, H0519: 3, H0711: 3, L0747: 3, L0752: 3, L0759: 3,

H0445: 3, L0592: 3, H0677: 3, H0624: 2, S0134: 2, S0116: 2, H0483: 2, S0360: 2, S0045: 2, S0046: 2, H0619: 2, S0222: 2, T0039: 2, H0069: 2, H0427: 2, H0599: 2, H0318: 2, H0581: 2, H0052: 2, H0596: 2, H0150: 2, H0012: 2, H0014: 2, H0169: 2, H0124: 2, H0163: 2, H0264: 2, H0412: 2, H0623: 2, H0561: 2, S0382: 2, S0440: 2, H0652: 2, S0426: 2, H0529: 2, L0640: 2, L0764: 2, L0773: 2, L0662: 2, L0774: 2, L0375: 2, L0655: 2, L0526: 2, L0438: 2, H0659: 2, H0658: 2, H0710: 2, S0404: 2, S3014: 2, S0027: 2, L0754: 2, L0750: 2, L0777: 2, L0780: 2, L0731: 2, L0588: 2, L0485: 2, H0422: 2, S0424: 2, H0506: 2, H0008: 2, H0352: 2, H0220: 1, H0686: 1, H0713: 1, H0717: 1, H0295: 1, S0430: 1, H0583: 1, H0650: 1, S0110: 1, S0001: 1, H0484: 1, H0255: 1, H0661: 1,

H0663: 1, H0664: 1, H0662: 1, H0638: 1, S0356: 1, S0376: 1, S0444: 1, S0408: 1, S0132: 1, H0393: 1, L0717: 1, H0351: 1, S0278: 1, H0261: 1, H0403: 1, H0592: 1, H0586: 1, H0497: 1, H0333: 1, H0632: 1, H0257: 1, H0486: 1, H0250: 1, H0075: 1, H0635: 1, H0036: 1, H0590: 1, H0253: 1, H0421: 1, T0103: 1, T0110: 1, H0327: 1, H0545: 1, H0009: 1, H0123: 1, H0050: 1, H0051: 1, S0051: 1, T0010: 1, H0355: 1, H0188: 1, H0288: 1, S0312: 1, S0314: 1, H0615: 1, H0039: 1, H0622: 1, L0455: 1, S0366: 1, H0598: 1, H0135: 1, H0040: 1, H0413: 1, H0056: 1, H0100: 1, L0435: 1, L0564: 1, H0494: 1, L0475: 1, H0334: 1, H0560: 1, H0641: 1, H0633: 1, H0647: 1, H0646: 1, S0344: 1, S0208: 1, S0210: 1, L0369: 1, L0763: 1, L0770: 1, L0667: 1, L0772: 1, L0372: 1, L0800: 1,

							L0521: 1, L0803: 1, L0650: 1, L0651: 1, L0653: 1, L0783: 1, L0383: 1, L0647: 1, S0428: 1, S0216: 1, S0374: 1, H0724: 1, L0352: 1, H0520: 1, H0365: 1, H0690: 1, H0435: 1, H0555: 1, H0187: 1, H0436: 1, H0627: 1, S3012: 1, S0037: 1, S0032: 1, L0743: 1, L0744: 1, L0749: 1, L0756: 1, L0779: 1, L0755: 1, L0757: 1, S0031: 1, H0595: 1, S0434: 1, S0436: 1, L0591: 1, L0599: 1, L0604: 1, L0593: 1, L0595: 1, L0601: 1, S0026: 1 and S0384: 1.				
422	HDPHI63	839704	432	144 - 452	1837	Glu-18 to Phe-29, Thr-36 to Pro-45.	AR096: 10, AR055: 4, AR053: 3, AR104: 3, AR060: 2	AR039: 4, AR033: 4, AR089: 3, AR052: 2, AR061: 2			74-91
423	HTEPM45	839875	433	132 - 1229	1838	Leu-3 to Leu-16, Leu-48 to Phe-58, Gly-113 to Lys-121, Arg-136 to Phe-147, Pro-326 to Ser-346.	AR096: 14, AR060: 6, AR055: 5, AR052: 4, AR053: 2	AR089: 10, AR061: 6, AR039: 5, AR033: 3, AR104: 2	6p25-p24	134570, 601090, 602028	88-106, 246-262, 63-79, 169-185

H0486: 102, S0360: 76,
L0598: 39, H0251: 35,
L0659: 32, H0144: 32,
H0013: 31, H0624: 28,
H0024: 26, H0050: 25,
L0471: 25, L0662: 22,
L0748: 22, H0619: 20,
H0123: 20, S0003: 18,
H0031: 15, H0170: 14,
H0124: 14, H0328: 13,
L0750: 13, H0644: 12,
S0126: 12, S0028: 11,
L0757: 11, S0196: 11,
H0587: 10, S0214: 10,
L0589: 10, S0040: 9,
H0622: 9, L0731: 9, H0171: 8, S0356: 8, L0717: 8,
H0586: 8, H0620: 8, H0252: 8, H0551: 8, H0352: 8,
H0661: 7, H0081: 7, L0747: 7, L0755: 7, S0358: 6,
H0598: 6, L0646: 6, L0771: 6, S3014: 6, H0343: 6,
H0595: 6, S0212: 5, H0329: 5, H0208: 5, H0574: 5,
H0316: 5, H0100: 5, L0666: 5, L0565: 5, H0658: 5,
S0390: 5, S0027: 5, S0011: 5, S0192: 5, S0194: 5,
S0376: 4, H0575: 4, H0039:

4, H0628: 4, H0090: 4,
UNKWN: 4, L0663: 4,
L0664: 4, S0374: 4, S0380:
4, L0744: 4, S0242: 4,
H0295: 3, H0645: 3, H0411:
3, H0546: 3, H0012: 3,
S0250: 3, L0768: 3, L0375:
3, H0684: 3, H0672: 3,
S0332: 3, L0754: 3, H0294:
2, H0663: 2, H0592: 2,
S0005: 2, H0333: 2, H0632:
2, H0485: 2, T0060: 2,
H0599: 2, H0309: 2, H0544:
2, H0545: 2, H0041: 2,
H0375: 2, H0553: 2, L0142:
2, H0647: 2, L0776: 2,
L0665: 2, H0648: 2, S0330:
2, S0378: 2, S0206: 2,
S0032: 2, L0751: 2, H0668:
2, S0384: 2, H0506: 2,
L0615: 1, S0342: 1, H0381:
1, S0116: 1, S0001: 1,
H0664: 1, H0125: 1, S0354:
1, T0008: 1, H0640: 1,
H0370: 1, H0391: 1, T0039:
1, H0101: 1, H0245: 1,
H0156: 1, L0021: 1, H0122:
1, H0318: 1, H0231: 1,
H0049: 1, T0003: 1, H0051:
1, H0286: 1, H0364: 1,

424	HTEBP06	839885	434	156 - 1244	1839	Met-1 to Ser-12, Asn-23 to Thr-33, Asn-35 to Gly-42, Pro-46 to Asp-51, Arg-86 to Asp-92, Ile-98 to Gly-108, Tyr-111 to Phe-128, Asn-140 to Cys-146, Gly-151 to Lys-182, Gly-190 to Ala-196, Leu-200 to Gln-212, Ile-217 to Lys-224,	AR104: 874, AR060: 684, AR055: 616, AR033: 568, AR061: 555, AR039: 520, AR089: 289, AR096: 146, AR052: 115, AR053: 114 H0038: 8, H0616: 6, L0758: 4, L0794: 3, H0545: 2, H0040: 1, L0768: 1 and L0790: 1.	H0428: 1, T0023: 1, L0143: 1, H0111: 1, H0163: 1, H0591: 1, H0038: 1, H0616: 1, H0058: 1, T0069: 1, H0080: 1, L0351: 1, L0564: 1, H0646: 1, H0654: 1, S0208: 1, L0763: 1, L0373: 1, L0764: 1, L0773: 1, L0648: 1, L0521: 1, L0767: 1, L0522: 1, L0775: 1, L0806: 1, L0607: 1, L0512: 1, L0634: 1, L0526: 1, L0783: 1, L0367: 1, H0547: 1, H0682: 1, H0659: 1, H0660: 1, H0666: 1, S0118: 1, S0037: 1, H0445: 1, L0590: 1, L0603: 1, H0665: 1, H0667: 1 and S0446: 1.			259-276

| 425 | HSKYK23 | 839888 | 435 | 204 - 869 | 1840 | Val-316 to Asn-324. Asn-19 to Pro-28, Ile-45 to Tyr-52. | AR039: 19, AR052: 17, AR055: 17, AR053: 16, AR089: 15, AR096: 13, AR060: 13, AR104: 12, AR033: 10, AR061: 8 L0794: 7, S0152: 6, L0750: 6, L0777: 6, L0803: 4, L0748: 4, L0731: 4, L0757: 4, L0759: 4, L0804: 3, L0659: 3, L0752: 3, S0358: 2, S0444: 2, S0360: 2, S0045: 2, L0766: 2, L0751: 2, L0756: 2, S0031: 2, L0588: 2, H0663: 1, S0442: 1, H0580: 1, S0046: 1, H0393: 1, H0486: 1, H0575: 1, H0318: 1, H0041: 1, H0123: 1, H0375: 1, H0687: 1, S0003: 1, H0031: 1, S0144: 1, H0529: 1, L0763: 1, L0662: 1, L0774: 1, L0775: 1, L0806: 1, L0518: 1, L0789: 1, L0663: 1, H0672: 1, S0380: 1, H0521: 1, H0694: 1, S0406: 1, S0206: 1, L0740: 1, L0779: 1, L0755: 1, S0242: 1 and S0424: 1. | | | 132-148 |

426	HBUAD85	839958	436	117-953	1841			154-171
						Trp-10 to Gly-16, Ser-19 to Asp-31, Ser-46 to Lys-53, Pro-60 to Ile-78, Ser-85 to Leu-91, Leu-146 to Lys-154, Trp-237 to Arg-246.	AR052: 14, AR053: 8, AR033: 7, AR055: 7, AR104: 7, AR060: 5, AR096: 5, AR089: 4, AR061: 4, AR039: 1 L0777: 8, L0794: 7, L0803: 4, L0748: 4, L0749: 4, L0789: 3, L0759: 3, S0360: 2, H0644: 2, S0422: 2, L0770: 2, L0800: 2, L0766: 2, L0804: 2, L0740: 2, L0750: 2, L0779: 2, L0752: 2, L0755: 2, L0731: 2, L0758: 2, L0595: 2, S0116: 1, S0442: 1, H0729: 1, H0733: 1, S0300: 1, L0021: 1, H0575: 1, H0122: 1, S0182: 1, H0569: 1, H0090: 1, H0038: 1, H0412: 1, S0440: 1, L0371: 1, L0769: 1, L0761: 1, L0764: 1, L0771: 1, L0521: 1, L0768: 1, L5574: 1, L0783: 1, L0382: 1, L0809: 1, L0790: 1, L0663: 1, H0520: 1, H0547: 1, H0659: 1, H0522: 1, H0134: 1, H0436: 1, H0626: 1, L0747: 1, L0753: 1, L0757: 1, H0444: 1, S0436: 1, S0194: 1,	

427	HCE1N85	840000	437	777 - 1880	1842	Leu-14 to Pro-22, Pro-127 to Pro-134, Ala-140 to Arg-145, Ser-189 to Gln-203, Leu-273 to Tyr-278.	S0276: 1, H0543: 1 and H0423: 1. AR089: 1, AR060: 1, AR039: 0, AR104: 0, AR055: 0, AR053: 0, AR061: 0, AR096: 0, AR033: 0	86-105
428	HROAX39	840008	438	30 - 341	1843	Leu-38 to Trp-43, Ala-72 to Thr-77.	AR039: 35, AR055: 23, AR033: 19, AR052: 18, AR053: 17, AR089: 15, AR060: 12, AR096: 12, AR104: 11, AR061: 10 H0068: 2, H0619: 1, H0632: 1, L0471: 1, H0033: 1, H0124: 1, H0316: 1, L0747: 1 and H0136: 1.	46-65
429	HHETF37	840056	439	84 - 383	1844	Ala-12 to Glu-17, Gly-29 to Arg-35, Leu-62 to Trp-68.	AR096: 5, AR052: 2, AR089: 2, AR033: 2, AR061: 2, AR060: 1, AR104: 1, AR055: 1, AR053: 0, AR039: 0 H0436: 2, S0354: 1, L0775: 1, L0658: 1, H0445: 1, H0543: 1 and H0422: 1.	67-87
430	HKAAS52	840160	440	40 - 873	1845	Met-1 to Ala-13, Cys-38 to Ile-43, Arg-65 to Leu-70, Tyr-185 to Leu-192,	AR052: 4, AR033: 3, AR053: 3, AR089: 3, AR060: 2, AR096: 2, AR055: 2, AR061: 1,	71-88

					Lys-217 to Thr-226.	AR039: 0, AR104: 0 H0494: 3, H0559: 2, H0547: 2, L0740: 2, H0423: 2, H0265: 1, H0662: 1, S0348: 1, S0418: 1, H0370: 1, H0492: 1, H0318: 1, H0052: 1, H0194: 1, H0050: 1, H0006: 1, H0266: 1, L0351: 1, L0766: 1, L0655: 1, S0310: 1, H0689: 1, S0152: 1, H0522: 1, H0543: 1 and H0422: 1.	113-143, 62-81
431	HISES36	840222	441	136 - 747	Ser-4 to Arg-13, Pro-15 to Trp-22.	AR039: 18, AR033: 12, AR104: 12, AR053: 9, AR052: 9, AR096: 9, AR055: 8, AR089: 8, AR060: 5, AR061: 5 L0741: 3, H0619: 2, T0010: 2, H0539: 2, H0717: 1, L0438: 1, H0435: 1, H0670: 1, H0521: 1, S0436: 1 and H0542: 1.	
432	HAPBL12	840579	442	215 - 1549	Lys-16 to Leu-21, Glu-70 to Lys-83, Cys-98 to Ser-104, Arg-112 to Glu-118, Lys-155 to Ser-160, Asn-196 to Ser-205, Trp-234 to Ser-241,	AR060: 14, AR104: 13, AR033: 11, AR039: 10, AR055: 9, AR089: 8, AR096: 7, AR061: 7, AR053: 6, AR052: 6 L0777: 11, L0756: 4, L0596: 4, S0414: 3, H0038:	50-66, 178-194, 276-292

319

| 433 | HTJMJ95 | 840671 | 443 | 330 - 1001 | 1848 | Ala-303 to Ala-308, Thr-314 to Gly-321, Asn-349 to Gly-355, Pro-370 to Glu-378, His-384 to Glu-395, Gln-415 to Ile-421, Thr-438 to Leu-444. | 3, L0659: 3, L0740: 3, H0265: 2, H0441: 2, S0003: 2, H0032: 2, H0616: 2, L0766: 2, H0144: 2, S0126: 2, L0439: 2, L0780: 2, L0759: 2, S0242: 2, H0542: 2, S0470: 1, S0342: 1, H0650: 1, H0341: 1, S0001: 1, S0282: 1, S0420: 1, S0007: 1, S0476: 1, H0619: 1, T0060: 1, H0013: 1, H0427: 1, H0098: 1, H0042: 1, H0581: 1, S0049: 1, H0052: 1, H0046: 1, H0024: 1, H0051: 1, S6028: 1, H0553: 1, H0644: 1, H0212: 1, H0634: 1, H0551: 1, H0647: 1, S0144: 1, S0344: 1, L0770: 1, L0769: 1, L0639: 1, L0772: 1, L0662: 1, L0794: 1, L0803: 1, L0805: 1, L0666: 1, L0663: 1, L0664: 1, S0374: 1, H0547: 1, H0648: 1, H0696: 1, L0754: 1, L0747: 1, L0752: 1, L0755: 1 and L0591: 1. | AR039: 17, AR033: 11, AR096: 8, AR053: 8, AR052: 7, AR104: 7, | 121-137 |

434	HTELT78	840700	444	177 - 998	1849	Arg-5 to Glu-11.			208-229, 235-251
							AR053: 25, AR052: 24, AR055: 16, AR033: 13, AR089: 13, AR096: 12, AR060: 11, AR061: 9, AR104: 8, AR039: 5, L0748: 2, L0779: 2, L0759: 2, H0556: 1, L0534: 1, H0565: 1, H0616: 1, S0422: 1, S0126: 1, L0751: 1, L0749: 1, L0758: 1 and	AR089: 7, AR055: 6, AR060: 5, AR061: 5, L0766: 6, L0439: 6, L0749: 5, S0022: 3, H0628: 2, L0769: 2, L0774: 2, L0666: 2, S0152: 2, L0755: 2, H0170: 1, S0476: 1, H0333: 1, H0559: 1, H0270: 1, L0021: 1, H0599: 1, H0123: 1, H0014: 1, S0003: 1, H0617: 1, L0055: 1, H0068: 1, H0135: 1, H0488: 1, H0509: 1, L0763: 1, L0637: 1, L0761: 1, L0772: 1, L0662: 1, L0768: 1, L0650: 1, L0655: 1, L0382: 1, L0809: 1, L0751: 1, L0747: 1, L0750: 1, L0756: 1, L0777: 1, L0731: 1, L0758: 1 and L0759: 1.	

435	HHFBP51	840811	445	100 - 690	1850	Pro-75 to Lys-91.	L0592: 1. AR089: 1, AR039: 1, AR055: 0, AR096: 0, AR061: 0, AR104: 0, AR060: 0, AR053: 0 L0774: 4, S0134: 2, H0383: 2, S0344: 2, L0803: 2, S0380: 2, H0650: 1, H0656: 1, S0360: 1, S0222: 1, H0486: 1, H0013: 1, H0009: 1, H0050: 1, S6028: 1, S0214: 1, T0023: 1, H0494: 1, H0561: 1, S0142: 1, S0002: 1, L0638: 1, L0512: 1, L0791: 1, H0547: 1, S0328: 1, H0579: 1, S0013: 1, L0742: 1, L0759: 1 and L0581: 1.	164-196, 43-75, 91-113, 138-156
436	HHBCS13	840896	446	470 - 1249	1851	Thr-22 to Ser-36.	AR096: 10, AR089: 10, AR104: 9, AR039: 9, AR033: 6, AR053: 5, AR060: 5, AR052: 2, AR055: 2, AR061: 2	89-105
437	HAJAT72	841335	447	500 - 946	1852		AR039: 28, AR053: 17, AR096: 11, AR033: 10, AR052: 9, AR104: 9, AR089: 8, AR055: 7, AR060: 6, AR061: 4	79-95

438	HTLHK92	842395	448	123 - 476	1853	Glu-12 to Lys-31.	H0561: 1 and S0152: 1. AR039: 12, AR055: 8, AR033: 7, AR053: 7, AR089: 6, AR052: 6, AR096: 6, AR060: 5, AR061: 4, AR104: 4 L0774: 3, L0783: 3, L0777: 3, H0013: 2, H0024: 2, L0662: 2, L0768: 2, L0565: 2, L0751: 2, L0758: 2, L0603: 2, H0170: 1, S6024: 1, H0661: 1, S0360: 1, S0222: 1, H0370: 1, H0575: 1, H0618: 1, H0545: 1, S0388: 1, H0124: 1, S0440: 1, S0150: 1, S0142: 1, L0770: 1, L0769: 1, L0764: 1, L0649: 1, L0375: 1, L0634: 1, L0809: 1, L0666: 1, H0547: 1, L0743: 1, L0754: 1, L0749: 1, L0731: 1, L0757: 1, H0506: 1 and H0008: 1.			52-71, 90-106
439	HAGBQ10	843516	449	1475 - 594	1854	Ser-9 to Ile-16, Asp-110 to Ala-119, Glu-289 to Tyr-294.	AR055: 496, AR039: 256, AR089: 232, AR060: 215, AR033: 209, AR053: 177, AR096: 155, AR052: 154, AR061: 146, AR104: 120 L0439: 5, L0779: 2,			128-147, 266-282, 29-45

| 440 | HCRBB73 | 844034 | 450 | 83 - 520 | 1855 | | AR096: 116, AR053: 115, AR089: 113, AR033: 94, AR052: 89, AR061: 79, AR055: 68, AR060: 67, AR039: 22, AR104: 20 L0794: 4, L0778: 1, T0048: 1, H0327: 1, H0012: 1, H0083: 1, H0038: 1, H0509: 1, L0770: 1, L0769: 1, L0659: 1, L0789: 1 and H0520: 1. | L0777: 2, L0759: 2, H0156: 1, S0010: 1, S0049: 1, H0052: 1, H0328: 1, L0794: 1, L0804: 1, H0144: 1, L0438: 1, L0352: 1, L0758: 1, L0589: 1 and S0412: 1. | 64-96, 3-34, 99-120, 38-55 |
| 441 | HWHHU11 | 844529 | 451 | 85 - 678 | 1856 | Pro-55 to Lys-67, Lys-134 to Glu-144, Pro-166 to Asn-174, Pro-192 to Trp-197. | AR089: 5, AR052: 4, AR053: 4, AR096: 3, AR061: 3, AR060: 3, AR055: 3, AR033: 3, AR104: 1, AR039: 0 L0748: 18, H0547: 8, L0731: 8, H0556: 7, H0039: 6, L0666: 6, H0046: 5, H0059: 5, L0775: 5, L0439: 5, L0755: 5, H0622: 4, L0662: 4, L0740: 4, L0751: 4, L0779: 4, H0575: 3, | | 21-54, 112-132, 67-89, 92-108 |

324

H0553: 3, H0529: 3, L0769: 3, L0659: 3, H0519: 3, L0588: 3, L0608: 3, L0593: 3, S0011: 3, H0255: 2, S0418: 2, S0046: 2, H0586: 2, S0049: 2, H0150: 2, H0424: 2, H0644: 2, H0560: 2, H0561: 2, S0002: 2, S0426: 2, L0763: 2, L0772: 2, L0646: 2, L0655: 2, L0527: 2, L0518: 2, L0783: 2, L0664: 2, L0665: 2, L0438: 2, H0689: 2, H0672: 2, H0555: 2, H0631: 2, S0206: 2, L0752: 2, L0757: 2, L0758: 2, L0485: 2, L0601: 2, H0543: 2, H0171: 1, H0265: 1, S0040: 1, H0294: 1, T0049: 1, S0134: 1, H0583: 1, H0657: 1, H0484: 1, H0661: 1, H0125: 1, S0420: 1, S0354: 1, S0358: 1, S0360: 1, S0410: 1, H0580: 1, S0132: 1, H0550: 1, H0431: 1, H0592: 1, H0587: 1, H0333: 1, H0270: 1, H0013: 1, H0599: 1, T0082: 1, H0318: 1, H0251: 1, H0309: 1, T0110: 1, H0545: 1, H0041: 1,

| 442 | HRAEB76 | 845247 | 452 | 1194 - | 1857 | Ile-19 to Lys-25. | H0620: 1, H0024: 1, H0057: 1, H0014: 1, S0051: 1, H0083: 1, S0024: 1, H0355: 1, H0266: 1, H0271: 1, H0188: 1, S0250: 1, H0328: 1, H0615: 1, L0483: 1, H0030: 1, H0031: 1, H0111: 1, H0032: 1, H0383: 1, H0674: 1, H0211: 1, L0456: 1, H0068: 1, H0135: 1, H0040: 1, H0634: 1, H0551: 1, H0412: 1, S0450: 1, H0647: 1, H0646: 1, S0144: 1, S0142: 1, S0344: 1, S0210: 1, L0761: 1, L0372: 1, L0764: 1, L0767: 1, L0768: 1, L0649: 1, L0375: 1, L0651: 1, L0784: 1, L0654: 1, L0657: 1, L0515: 1, L0658: 1, L0383: 1, L0809: 1, L0663: 1, S0006: 1, H0520: 1, H0593: 1, H0682: 1, H0684: 1, H0658: 1, H0670: 1, H0696: 1, S0027: 1, L0754: 1, L0747: 1, L0750: 1, L0591: 1, L0595: 1, L0603: 1, S0106: 1, H0668: 1, H0542: 1 and H0423: 1. | AR096: 8, AR039: 4,   56-75, 2- |

443	HPJAO13	845355	453	1517			AR053: 4, AR052: 4, AR089: 3, AR033: 3, AR060: 2, AR104: 2, AR055: 1, AR061: 1 L0756: 4, L0803: 3, L0754: 3, L0731: 3, L0766: 2, L0666: 2, L0779: 2, L0755: 2, S6024: 1, S0114: 1, H0486: 1, L0021: 1, T0082: 1, L0145: 1, L0764: 1, L0363: 1, L0794: 1, L0804: 1, S0052: 1, H0555: 1, L0758: 1, L0592: 1, S0026: 1, H0136: 1 and S0460: 1.	18
				139 - 612	1858		AR061: 2, AR089: 1, AR055: 1, AR052: 1, AR033: 1, AR060: 1, AR096: 1, AR039: 0, AR053: 0, AR104: 0 S0152: 1	19-37, 88-106, 40-56, 62-78, 130-146
444	HHENF67	845465	454	148 - 546	1859	Gly-44 to Phe-55, Pro-57 to Ser-64, Arg-83 to Gly-90, Leu-98 to Thr-105.	AR096: 43, AR053: 36, AR039: 32, AR089: 28, AR052: 26, AR104: 19, AR060: 19, AR033: 18, AR055: 7, AR061: 5 S0360: 3, H0031: 3, L0015: 2, H0583: 3, H0547: 3, L0015: 2, H0583: 1, H0547: 3, L0443: 1, H0613: 1, L0443: 1, H0613: 1,	110-126, 11-27

							Features	Clones	Chromosome	OMIM		%
445		HLQDC55	846521	455	10 - 444	1860	Met-1 to Ser-7, Gly-16 to Ile-24, Thr-28 to Asp-38, Asp-55 to Phe-64, Ser-76 to Lys-82, Leu-116 to Glu-124.	AR055: 12, AR061: 7, AR060: 6, AR053: 5, AR033: 4, AR089: 4, AR052: 3, AR096: 2, AR104: 2, AR039: 0 H0574: 1 and S0344: 1. H0586: 1, H0013: 1, S0346: 1, H0546: 1, H0551: 1, H0059: 1, H0509: 1, L0662: 1, L0803: 1, L0774: 1, L0775: 1, L0805: 1, L0657: 1, L0659: 1, L0526: 1, L0666: 1, L0664: 1, S0380: 1 and H0543: 1.				91-110
446		HTTJW49	846674	456	94 - 660	1861	Gly-49 to Thr-57, Gly-139 to Arg-144.	AR055: 4, AR060: 3, AR033: 3, AR096: 3, AR061: 3, AR039: 2, AR089: 2, AR052: 2, AR053: 1, AR104: 1 L0769: 3, L0803: 3, L0748: 3, L0749: 3, H0574: 2, H0046: 2, H0634: 2, S0440: 2, L0794: 2, L0805: 2, L0776: 2, L0439: 2, L0754: 2, L0747: 2, L0755: 2, L0605: 2, L0593: 2, H0686: 1, S0360: 1, L0717: 1, H0069: 1, H0575: 1, H0263: 1, H0620: 1, H0024: 1.	7q21.3-q22.1	120160, 120160, 120160, 120160, 126650, 126650, 129900, 154276, 173360, 173360, 183600, 602136, 602136, 602136, 602447		77-94

| 447 | HSYAD28 | 846772 | 457 | 98 – 442 | 1862 | Gln-33 to Gly-42, Ser-69 to Ala-77. | AR089: 2, AR096: 2, AR053: 2, AR052: 2, AR039: 2, AR060: 1, AR055: 1, AR104: 1, AR033: 1, AR061: 1 L0766: 6, L0749: 6, L0803: 2, H0395: 1, H0556: 1, H0599: 1, H0196: 1, H0545: 1, H0551: 1, H0633: 1, L0772: 1, L0800: 1, L0794: 1, L0806: 1, L0382: 1, S0152: 1, L0751: 1, L0754: 1, L0750: 1, L0608: 1, H0542: 1 and H0543: 1. | 87-111 |
| 448 | HLWAR77 | 847144 | 458 | 32 – 997 | 1863 | Gln-87 to Pro-104, Trp-107 to Lys-119, | 1, S0388: 1, H0510: 1, H0266: 1, H0644: 1, L0455: 1, H0163: 1, H0561: 1, S0438: 1, H0695: 1, L0763: 1, L0800: 1, L0804: 1, L0774: 1, L0775: 1, L0807: 1, L0659: 1, L0783: 1, L0809: 1, L0666: 1, L0665: 1, L0438: 1, H0658: 1, H0539: 1, S0152: 1, H0522: 1, L0740: 1, L0777: 1, L0603: 1, S0276: 1 and H0542: 1. AR089: 2, AR096: 2, AR039: 2, AR033: 2, | 54-85, 170-198, |

449	HCE2W33	847388	459	1134 - 1820	1864			

His-78 to Tyr-106, Glu-115 to Asp-120, Trp-139 to Thr-146, Pro-153 to Thr-187, Pro-213 to Ser-220.

AR104: 249, AR061: 203, AR060: 179, AR033: 175, AR039: 168, AR055: 147, AR096: 122, AR089: 92, AR053: 67, AR052: 66 L0741: 18, L0766: 10, L0438: 9, H0052: 6, L0748: 6, H0622: 5, H0617: 5, L0665: 5, H0539: 5, H0542: 5, S0418: 4, H0553: 4, H0059: 4, H0494: 4, L0666: 4, H0521: 4, L0751: 4, L0750: 4, L0758: 4, L0759: 4, L0593: 4, L0595: 4, H0543: 4, H0656: 3, H0484: 3, S0420: 3, H0706: 3, H0086: 3, H0009: 3, H0050: 3, H0124: 3, H0087: 3, T0042: 3, H0509: 3, L0770: 3, L0761: 3, L0772: 3, L0771: 3, L0768: 3, L0497: 3, L0776: 3, L0659: 3, L0664: 3, L0439: 3, L0740: 3, L0591: 3, H0556: 2,

47-77

Thr-156 to Gln-163, Ser-168 to Lys-173, Glu-240 to Phe-246, Ser-285 to His-291, Tyr-297 to Gln-306, Glu-312 to Ser-320.

AR104: 1, AR060: 1, AR061: 1, AR053: 1, AR052: 1, AR055: 1 H0553: 4 and L0759: 2.

121-141, 21-45, 208-224

S0212: 2, H0661: 2, S0442: 2, S0358: 2, S0360: 2, H0393: 2, S0278: 2, H0333: 2, H0544: 2, H0545: 2, H0046: 2, H0041: 2, H0292: 2, S0036: 2, H0135: 2, H0100: 2, L0764: 2, L0533: 2, L0499: 2, L0806: 2, L0655: 2, L0382: 2, L0809: 2, S0374: 2, H0547: 2, H0435: 2, H0436: 2, S0028: 2, L0747: 2, L0752: 2, L0755: 2, L0757: 2, H0136: 2, L0411: 1, H0624: 1, H0265: 1, T0002: 1, H0222: 1, S0040: 1, H0716: 1, H0650: 1, H0657: 1, H0341: 1, S0282: 1, H0255: 1, H0125: 1, S0376: 1, H0676: 1, H0580: 1, H0208: 1, S0045: 1, S0476: 1, H0645: 1, L0717: 1, H0437: 1, H0586: 1, H0497: 1, H0632: 1, H0349: 1, H0575: 1, H0618: 1, H0253: 1, H0318: 1, H0421: 1, H0235: 1, H0572: 1, H0571: 1, H0012: 1, H0197: 1, H0024: 1, H0373: 1, H0051: 1, T0010: 1, H0594: 1, H0288: 1,

| 450 | HSOAC39 | 847431 | 460 | 77 - 679 | 1865 | Ala-118 to Phe-124, Arg-178 to Lys-201. | H0328: 1, H0428: 1, L0142: 1, S0364: 1, H0040: 1, H0616: 1, H0551: 1, H0264: 1, H0268: 1, H0412: 1, T0041: 1, S0440: 1, S0144: 1, S0142: 1, S0210: 1, H0695: 1, L0369: 1, L0763: 1, L0769: 1, L5565: 1, L0667: 1, L0646: 1, L0643: 1, L0648: 1, L0649: 1, L0774: 1, L0775: 1, L0375: 1, L0651: 1, L0653: 1, L0658: 1, L0383: 1, L0663: 1, H0519: 1, H0658: 1, H0670: 1, H0648: 1, H0696: 1, H0134: 1, H0555: 1, H0576: 1, S3014: 1, S0032: 1, L0745: 1, L0749: 1, L0731: 1, H0445: 1, S0434: 1, L0581: 1, L0361: 1, H0668: 1, S0276: 1, L0469: 1, H0422: 1 and S0460: 1. AR096: 2, AR033: 2, AR053: 2, AR060: 2, AR089: 1, AR104: 1, AR052: 1, AR055: 1, AR061: 1, AR039: 0 S0358: 36, S03374: 19, S0408: 16, S0444: 15, L0518: 12, S0442: 11, | 1-28, 151-175, 127-143 |

L0754: 11, L0740: 9,
L0747: 9, L0596: 9, S0354:
8, L0519: 8, H0494: 7,
S0406: 7, L0755: 7, S0440:
6, S0360: 5, L0745: 5,
H0556: 4, H0675: 4, S0132:
4, H0251: 4, L0806: 4,
L0809: 4, S0328: 4, L0777:
4, L0772: 3, L0646: 3,
L0662: 3, L0649: 3, L0549:
3, L0529: 3, H0696: 3,
S0434: 3, H0483: 2, S0376:
2, H0597: 2, H0231: 2,
H0046: 2, H0188: 2, H0644:
2, H0646: 2, L0764: 2,
L0768: 2, L0766: 2, L0783:
2, L0382: 2, L0779: 2,
L0600: 2, H0218: 1, S0040:
1, S0212: 1, H0663: 1,
H0664: 1, S0420: 1, S0046:
1, H0549: 1, H0592: 1,
H0586: 1, T0060: 1, T0109:
1, H0575: 1, H0036: 1,
S0049: 1, H0085: 1, H0183:
1, T0115: 1, H0015: 1,
H0687: 1, H0039: 1, L0483:
1, H0031: 1, H0032: 1,
H0165: 1, H0673: 1, H0169:
1, H0316: 1, H0413: 1,
S0448: 1, S0450: 1, L0369:

| 451 | HAJAV01 | 847551 | 461 | 357 - 707 | 1866 | Ala-28 to Thr-35. | AR055: 2, AR053: 2, AR039: 2, AR033: 2, AR089: 1, AR052: 1, AR061: 1, AR060: 1, AR096: 0 H0255: 4, H0617: 3, L0666: 3, H0690: 3, L0742: 3, S0222: 2, H0618: 2, L0665: 2, H0265: 1, H0556: 1, H0295: 1, S0212: 1, H0661: 1, S0354: 1, S0376: 1, S0360: 1, S0046: 1, H0619: 1, L0717: 1, S0278: 1, H0455: 1, H0438: 1, H0559: 1, S0049: 1, H0052: 1, H0024: 1, S0051: 1, S6028: 1, H0428: 1, H0424: | 1, L0640: 1, L0763: 1, L0642: 1, L0363: 1, L0386: 1, L0803: 1, L0774: 1, L0775: 1, L0805: 1, L0776: 1, L0659: 1, L0517: 1, L0543: 1, L0664: 1, L0665: 1, H0144: 1, H0682: 1, H0658: 1, H0670: 1, S0380: 1, S0044: 1, H0134: 1, S0404: 1, L0743: 1, L0750: 1, L0731: 1, L0757: 1, H0445: 1, S0011: 1, H0668: 1 and S0276: 1. | 86-109, 40-56 |

| 452 | HWGQC67 | 847568 | 462 | 121 - 522 | 1867 | Lys-53 to Asn-58. | 1, H0673: 1, H0124: 1, H0087: 1, H0551: 1, H0561: 1, S0210: 1, H0529: 1, L0761: 1, L0644: 1, L0803: 1, L0774: 1, L0775: 1, L0805: 1, L0656: 1, H0519: 1, H0659: 1, H0672: 1, L0777: 1, L0698: 1 and H0677: 1. | AR053: 1, AR089: 1, AR033: 1, AR061: 1, AR060: 0, AR096: 0, AR052: 0, AR055: 0, AR039: 0, AR104: 0 L0805: 3, L0659: 3, S0406: 3, L0779: 3, S0376: 3, 2, H0013: 2, H0553: 2, L0761: 2, L0773: 2, L0662: 2, 2, L0794: 2, L0803: 2, L0665: 2, H0539: 2, S0404: 2, 2, L0748: 2, L0754: 2, L0731: 2, H0265: 1, S0114: 1, H0583: 1, H0650: 1, S0212: 1, S0442: 1, S0354: 1, S0408: 1, H0351: 1, H0592: 1, H0575: 1, S0474: 1, H0581: 1, H0271: 1, H0687: 1, H0622: 1, S0382: 1, S0448: 1, H0529: 1, L0640: 1, L0763: 1, L0764: 1, | | | 93-114, 17-35, 70-86 |

335

							1, L0771: 1, L0804: 1, L0776: 1, L0655: 1, L0788: 1, L0666: 1, H0666: 1, H0555: 1, L0751: 1, L0750: 1 and L0759: 1.	
453	HFIJC17	847634	463	394 - 726	1868	Ser-35 to Arg-45.	AR052: 7, AR096: 7, AR089: 5, AR053: 4, AR060: 4, AR033: 3, AR104: 2, AR061: 2, AR055: 2, AR039: 0 H0438: 1, L0764: 1, L0626: 1, H0445: 1 and S0194: 1.	46-62, 18-34
454	HBXCD74	847677	464	709 - 1014	1869	Pro-3 to Glu-8.	AR096: 3, AR089: 2, AR053: 1, AR104: 1, AR055: 1, AR060: 1, AR052: 1, AR061: 1, AR039: 0, AR033: 0 L0439: 11, L0751: 5, S0222: 3, L0769: 3, L0766: 3, H0617: 2, S0038: 2, L0770: 2, L0764: 2, L0794: 2, L0438: 2, L0747: 2, L0752: 2, H0445: 2, S6024: 2, S0001: 1, H0351: 1, H0586: 1, S0010: 1, H0373: 1, S0051: 1, T0010: 1, S6028: 1, H0264: 1, S0150: 1, L0768: 1, S0052: 1,	64-80

| 455 | HPICD14 | 847876 | 465 | 1284 - 544 | 1870 | Pro-44 to Trp-49, Met-58 to His-65, Pro-68 to Lys-76, Ser-153 to Asp-158, Ser-235 to Gln-246. | AR033: 5, AR096: 5, AR052: 5, AR055: 5, AR089: 4, AR053: 4, AR061: 4, AR060: 4, AR039: 2, AR104: 2 L0748: 8, L0766: 7, L0771: 5, S0422: 3, H0529: 3, H0519: 3, L0749: 3, L0756: 3, H0641: 2, L0659: 2, S0374: 2, L0438: 2, H0547: 2, L0751: 2, L0750: 2, L0758: 2, H0484: 1, S0420: 1, S0442: 1, S0358: 1, S0410: 1, S0007: 1, H0632: 1, L0483: 1, H0606: 1, H0268: 1, H0494: 1, S0150: 1, L0763: 1, L0637: 1, L0764: 1, L0768: 1, L0774: 1, L0653: 1, L0809: 1, L0666: 1, H0144: 1, H0520: 1, H0658: 1, S0328: 1, H0539: 1, S0406: 1, S0027: 1, L0744: 1, L0754: 1, L0777: 1, S0434: 1, L0592: 1, L0608: 1, L0593: 1, H0136: 1, H0543: 1 and H0422: 1. H0522: 1, L0741: 1, L0753: 1, L0758: 1 and H0422: 1. | 210-235, 95-117, 184-204, 161-177, 123-139 |

456	HBGNJ21	848184	466	21 - 521	1871	Glu-151 to Gln-157.	AR096: 1, AR033: 1, AR060: 1, AR053: 1, AR052: 1, AR089: 1, AR055: 1, AR061: 0, AR104: 0, H0617: 3, S0282: 1, S0045: 1, H0135: 1 and S0028: 1.	88-114, 113-137, 17-42, 47-68
457	HBGNW78	848214	467	299 - 640	1872	Gln-10 to Tyr-16, Asn-20 to Arg-25.	AR033: 1, AR089: 1, AR053: 1, AR061: 0, AR052: 0, AR104: 1, AR096: 1, AR060: 0, AR055: 0, AR039: 0 H0617: 5, S0278: 1 and S0028: 1.	49-69
458	HSDZN36	848395	468	652 - 1053	1873		AR055: 16, AR060: 13, AR104: 10, AR089: 7, AR039: 5, AR033: 14, AR061: 10, AR052: 8, AR053: 6, AR096: 5 S0414: 26, L0777: 8, L0758: 4, S0422: 3, L0731: 3, H0170: 2, S6016: 2, H0009: 2, L0471: 2, H0051: 2, S6028: 2, H0266: 2, L0653: 2, L0809: 2, L0666: 2, L0663: 2, H0689: 2, L0745: 2, L0750: 2, S0412: 2, S0358: 1, S0360: 1,	114-132, 65-82, 39-55, 14-30

459	HFPCS09	848480	469	9 - 401	1874		S0408: 1, H0728: 1, L0717: 1, H0351: 1, S0222: 1, H0455: 1, H0587: 1, H0574: 1, H0052: 1, H0046: 1, H0615: 1, H0428: 1, H0553: 1, S0036: 1, H0090: 1, H0591: 1, H0623: 1, S0440: 1, L0637: 1, L0771: 1, L0794: 1, L0766: 1, L0388: 1, L0803: 1, L0774: 1, L0805: 1, L0607: 1, L0659: 1, L0636: 1, L0647: 1, L0790: 1, L0664: 1, L0665: 1, H0519: 1, H0658: 1, S0378: 1, H0518: 1, S0152: 1, H0521: 1, S3012: 1, L0779: 1, L0752: 1, L0759: 1, S0434: 1 and H0653: 1. AR039: 74, AR096: 66, AR053: 44, AR055: 38, AR052: 38, AR033: 34, AR104: 33, AR089: 27, AR060: 21, AR061: 19	32-48, 98-117, 8-24
460	HAIBB95	848610	470	301 - 795	1875	Glu-9 to Leu-18, Leu-22 to Pro-27.	AR039: 16, AR055: 12, AR104: 8, AR053: 8, AR033: 8, AR060: 8, AR052: 7, AR096: 7, AR089: 6, AR061: 6	88-107

461	HHEFI08	848769	471	109 - 417	1876	Gly-82 to Tyr-87.	H0038: 3, L0770: 3, L0777: 3, L0794: 2, L0766: 2, L0803: 2, L0779: 2, L0758: 2, S0132: 1, H0393: 1, H0549: 1, H0586: 1, H0559: 1, H0004: 1, H0581: 1, H0545: 1, H0457: 1, H0266: 1, H0030: 1, H0316: 1, H0551: 1, H0056: 1, L0659: 1, L0517: 1, L0792: 1, H0691: 1, H0555: 1 and L0599: 1. AR096: 1, AR089: 1, AR060: 1, AR061: 1, AR033: 0, AR052: 0, AR055: 0, AR039: 0, AR053: 0, AR104: 0 H0561: 1, L0748: 1 and H0542: 1.	61-79
462	HE8OM63	848773	472	10 - 432	1877	Ala-57 to Trp-62.	AR089: 1, AR033: 0, AR055: 0, AR039: 0, AR053: 0, AR060: 0, AR096: 0, AR061: 0, AR052: 0, AR104: 0 H0013: 1 and H0561: 1.	110-128
463	HAJAG88	848785	473	158 - 631	1878	Arg-26 to Cys-31.	AR096: 6, AR089: 4, AR039: 3, AR053: 3, AR033: 3, AR052: 3, AR060: 2, AR104: 2,	2-24, 116-139, 32-49, 93-111, 62-78

| 464 | HAJCL92 | 849547 | 474 | 33 - 2522 | 1879 | Lys-136 to Glu-143, Lys-184 to Ser-189, Ser-195 to Asn-205, Asn-232 to Thr-240, Arg-276 to Phe-285, Glu-406 to Glu-414, Thr-476 to Tyr-482, Tyr-496 to Ala-501, Pro-588 to Glu-593, Pro-612 to Leu-618, Gly-623 to Gln-630, Thr-670 to Ser-681, Lys-701 to Glu-715, Lys-759 to Glu-769, Met-773 to Asn-797, Ser-809 to Asp-823. | AR053: 2, AR089: 2, AR033: 2, AR060: 1, AR061: 1, L0770: 9, S0152: 6, L0744: 6, L0758: 6, L0665: 5, S0404: 5, S0356: 4, L0794: 4, L0803: 4, L0755: 4, L0595: 4, H0591: 3, H0547: 3, L0777: 3, S0408: 2, H0619: 2, H0581: 2, L0471: 2, H0188: 2, L0771: 2, L0659: 2, L0666: 2, L0663: 2, L0664: 2, H0436: 2, L0747: 2, L0731: 2, L0362: 2, H0170: 1, T0002: 1, H6657: 1, H0661: 1, H0638: 1, S0442: 1, S0358: 1, S0007: 1, L0717: 1, H0497: 1, T0039: 1, T0109: | AR055: 2, AR096: 2, AR052: 2, AR055: 2, AR104: 1, AR039: 1 | AR055: 2, AR061: 1, L0527: 2, H0657: 1, H0341: 1, S0222: 1, H0438: 1, T0048: 1, S0049: 1, S0250: 1, S0036: 1, H0087: 1, H0561: 1, L0369: 1, L0388: 1, L0518: 1, H0520: 1, H0519: 1, H0435: 1, L0366: 1 and L0697: 1. | 739-756, 89-105, 249-265, 166-182, 511-527 |

| 465 | HHAMA15 | 849576 | 475 | 62 - 646 | 1880 | 1, H0013: 1, H0069: 1, H0575: 1, H0004: 1, H0318: 1, H0050: 1, H0014: 1, S0388: 1, H0687: 1, S0250: 1, S0003: 1, H0090: 1, H0616: 1, L0060: 1, H0551: 1, H0268: 1, H0412: 1, H0413: 1, H0561: 1, S0352: 1, S0372: 1, S0150: 1, L0640: 1, L0804: 1, L0650: 1, L0383: 1, L0791: 1, H0144: 1, H0519: 1, H0435: 1, H0648: 1, H0672: 1, H0521: 1, S0406: 1, H0478: 1, S0037: 1, S0027: 1, L0439: 1, L0751: 1, L0754: 1, L0750: 1, L0752: 1, L0759: 1, L0361: 1, H0136: 1 and S0196: 1.

AR096: 2, AR104: 1, AR055: 1, AR033: 1, AR061: 1, AR060: 1, AR089: 1, AR039: 0, AR052: 0, AR053: 0, S0358: 6, L0803: 5, H0510: 2, S0438: 2, S0422: 2, L0769: 2, L0805: 2, L0527: 2, L0789: 2, L0748: 2, L0747: 2, L0750: 2, L0615: 1, L0460: 1, H0484: | 109-133, 175-191, 30-46 |

466	HPJDE45	849610	476	550 - 1353	1881	Ala-5 to Asn-28, Pro-47 to His-52, Tyr-83 to Arg-90.	1, S0444: 1, S0222: 1, H0486: 1, T0048: 1, H0041: 1, H0024: 1, H0646: 1, L0800: 1, L0662: 1, L0629: 1, L0518: 1, L0809: 1, L0791: 1, S0374: 1, H0627: 1, L0756: 1, L0755: 1, L0731: 1 and L0759: 1. AR096: 3, AR089: 3, AR053: 3, AR060: 2, AR033: 2, AR104: 2, AR055: 2, AR039: 1, AR052: 1, AR061: 1 H0436: 3, L0605: 3, H0551: 2, L0662: 2, S0028: 2, L0748: 2, L0754: 2, L0759: 2, S0134: 1, S0001: 1, S0358: 1, S0360: 1, H0550: 1, H0404: 1, H0156: 1, H0041: 1, H0050: 1, H0031: 1, H0591: 1, S0386: 1, L0521: 1, L0803: 1, H0547: 1, H0682: 1, H0658: 1, S0152: 1, S0027: 1, L0745: 1, H0445: 1, S0196: 1 and H0423: 1.	245-261
467	HPMJG77	849645	477	179 - 1405	1882	Met-1 to Ser-8, Ser-31 to Asp-40, Asn-44 to Val-51,	AR033: 7, AR060: 7, AR052: 7, AR055: 6, AR096: 5, AR089: 5,	298-314, 69-85

Asp-87 to Ser-95, Pro-115 to Ser-125, Phe-131 to Phe-138, Leu-166 to Gly-171, His-197 to Gln-206, Leu-217 to Lys-224, Thr-359 to Glu-370, Met-373 to Tyr-378, Lys-403 to Asn-409.	AR053: 5, AR039: 4, AR061: 3, AR104: 2 L0803: 15, L0766: 5, S0208: 4, L0758: 4, S0222: 3, S0003: 3, H0529: 3, L0770: 3, L0666: 3, L0756: 3, H0170: 2, H0171: 2, S0356: 2, H0637: 2, S0045: 2, L0763: 2, L0662: 2, L0794: 2, L0774: 2, L0805: 2, L0809: 2, H0436: 2, L0747: 2, L0750: 2, L0755: 2, H0624: 1, S0418: 1, H0741: 1, S0132: 1, H0331: 1, H0013: 1, H0318: 1, S0049: 1, H0052: 1, H0596: 1, H0457: 1, H0051: 1, H0510: 1, S6028: 1, S0214: 1, H0428: 1, H0553: 1, H0644: 1, H0032: 1, H0090: 1, H0591: 1, H0616: 1, H0413: 1, H0494: 1, L0475: 1, S0438: 1, S0344: 1, L0796: 1, L0637: 1, L0646: 1, L0800: 1, L0648: 1, L0804: 1, L0806: 1, L0776: 1, L0655: 1, L0807: 1, L0527: 1, L0659: 1, L0790: 1, L0791: 1, L0664: 1, H0725: 1, S0148: 1, H0520:

| 468 | HBCCG79 | 850225 | 478 | 184 - 723 | 1883 | Pro-3 to Thr-9, Leu-39 to Val-44, Ile-121 to Tyr-128, Ser-149 to Val-156. | 1, H0519: 1, H0593: 1, S0330: 1, H0521: 1, H0522: 1, S0406: 1, S0392: 1, S3014: 1, S0028: 1, S0206: 1, L0740: 1, L0754: 1, L0745: 1, L0779: 1, L0777: 1, L0752: 1, L0731: 1, S0436: 1, L0596: 1, S0194: 1 and H0423: 1.

AR052: 20, AR096: 20, AR089: 15, AR053: 14, AR060: 13, AR033: 10, AR055: 9, AR039: 8, AR104: 5, AR061: 4 S0126: 6, L0766: 5, S0046: 3, S0152: 3, L0748: 3, S0354: 2, S0376: 2, S0045: 2, H0013: 2, H0050: 2, H0634: 2, H0547: 2, H0521: 2, S0028: 2, L0747: 2, L0731: 2, L0596: 2, S0040: 1, H0657: 1, H0381: 1, S0356: 1, S0360: 1, H0393: 1, L0717: 1, H0370: 1, H0599: 1, H0318: 1, H0581: 1, H0123: 1, L0471: 1, H0024: 1, H0014: 1, H0266: 1, S0003: 1, S0022: 1, H0031: 1, H0591: 1, H0038: 1, H0551: 1, T0042: 1, | 130-146 |

345

469	HFIHQS53	850238	479	19 - 651	1884	Thr-43 to Leu-48, Ala-74 to Ser-85, Ser-122 to Asn-130, Gln-133 to Gly-139.	H0561: 1, S0144: 1, H0529: 1, L0646: 1, L0794: 1, L0774: 1, L0776: 1, L0659: 1, L0666: 1, L0664: 1, H0435: 1, S0378: 1, H0555: 1, S0027: 1, S0206: 1, L0750: 1, L0759: 1, H0653: 1 and H0543: 1. AR033: 1, AR096: 1, AR052: 1, AR055: 1, AR060: 1, AR089: 1, AR104: 1, AR039: 1, AR061: 1, AR053: 1 H0656: 2, S0420: 2, L0364: 2, H0650: 1, H0657: 1, S0356: 1, S0360: 1, H0486: 1, H0598: 1, H0591: 1, H0529: 1, L0764: 1, H0519: 1, H0521: 1, H0522: 1, S0044: 1, H0445: 1, S0194: 1 and H0677: 1.	95-111
470	HUVFU38	850252	480	367 - 960	1885	Ala-47 to Asp-53, Glu-105 to Arg-112, Tyr-150 to Leu-157.	AR055: 8, AR061: 5, AR060: 5, AR096: 4, AR089: 4, AR052: 4, AR033: 4, AR053: 3, AR104: 3, AR039: 3 H0623: 2 and S0278: 1.	159-179
471	HUDBK83	850353	481	3238 - 1439	1886	Gly-38 to Asp-47, Thr-208 to Phe-221,	AR089: 4, AR033: 4, AR052: 4, AR096: 4,	234-251, 18-34,

157-173, 443-459		
Glu-273 to Tyr-279, Thr-286 to Arg-291, Ala-341 to Asn-346, Ser-365 to Leu-370, Asp-519 to Thr-526, Pro-563 to Gly-568.	AR053: 3, AR060: 3, AR061: 3, AR055: 3, AR039: 2, AR104: 2 H0253: 10, H0617: 8, H0559: 7, H0265: 6, H0618: 5, H0551: 5, S0434: 5, H0052: 4, H0620: 4, L0794: 4, H0556: 3, H0135: 3, H0087: 3, L0659: 3, L0666: 3, L0663: 3, L0438: 3, H0522: 3, L0749: 3, H0171: 2, H0657: 2, H0341: 2, H0484: 2, H0255: 2, S0356: 2, S0360: 2, S0046: 2, H0550: 2, H0251: 2, H0051: 2, H0188: 2, H0424: 2, H0031: 2, H0040: 2, H0494: 2, S0344: 2, L0769: 2, L0662: 2, L0774: 2, L0783: 2, L0809: 2, H0696: 2, L0439: 2, L0751: 2, L0779: 2, L0731: 2, L0759: 2, L0605: 2, L0361: 2, L0601: 2, H0624: 1, H0159: 1, S6024: 1, H0295: 1, H0656: 1, S0420: 1, S0442: 1, S0408: 1, H0637: 1, L0717: 1, H0351: 1, S0222: 1, H0441: 1, H0370: 1, H0592: 1, H0586: 1, H0497: 1,	

H0643: 1, H0257: 1, H0013: 1, H0635: 1, H0156: 1, H0042: 1, H0706: 1, H0318: 1, H0581: 1, H0194: 1, H0327: 1, H0046: 1, H0009: 1, H0178: 1, H0565: 1, H0012: 1, H0023: 1, H0201: 1, S0051: 1, H0083: 1, S6028: 1, H0266: 1, H0271: 1, H0428: 1, H0604: 1, H0417: 1, H0181: 1, H0708: 1, H0163: 1, H0038: 1, H0634: 1, H0063: 1, H0264: 1, H0412: 1, S0038: 1, L0351: 1, H0359: 1, S0150: 1, H0646: 1, H0538: 1, S0002: 1, S0426: 1, L0640: 1, L0772: 1, L0372: 1, L0641: 1, L0643: 1, L0764: 1, L0767: 1, L0768: 1, L0766: 1, L0375: 1, L0378: 1, L0806: 1, L0652: 1, L0656: 1, L0636: 1, L0790: 1, L0664: 1, H0144: 1, S0374: 1, H0520: 1, H0547: 1, H0519: 1, H0593: 1, H0682: 1, H0651: 1, S0328: 1, H0539: 1, S0380: 1, S0332: 1, S0406: 1, S3014: 1, S0027: 1, L0754: 1,

472	HDPSB01	850581	482	38 - 391	1887			
						AR052: 5, AR039: 4, AR053: 4, AR033: 3, AR096: 3, AR060: 3, AR055: 3, AR089: 2, AR104: 2, AR061: 1 H0521: 7, L0519: 4, L0598: 3, L0794: 3, L0779: 3, L0755: 3, H0542: 3, H0637: 2, H0251: 2, L0662: 2, L0803: 2, H0436: 2, L0743: 2, L0749: 2, L0752: 2, L0599: 2, H0543: 2, H0661: 1, H0305: 1, S0358: 1, S0360: 1, S0278: 1, H0486: 1, H0427: 1, T0082: 1, H0309: 1, H0014: 1, H0271: 1, H0561: 1, S0144: 1, S0344: 1, L0631: 1, L0800: 1, L0804: 1, L0651: 1, L0806: 1, L0653: 1, L0776: 1, L0527: 1, L0659: 1, L0666: 1, H0144: 1, H0672: 1, H0696: 1, H0478: 1, L0750: 1, L0756: 1, L0758: 1, S0031: 1, H0444: 1	L0750: 1, L0755: 1, L0757: 1, L0758: 1, S0031: 1, S0436: 1, L0593: 1, H0667: 1, H0217: 1, H0423: 1, H0422: 1 and S0042: 1.	49-76, 1-17, 30-46, 94-110

#	Clone				Seq. ID	Description	Data	
473	HKAPB61	850629	483	45 - 572	1888	Pro-16 to Thr-25, Thr-47 to Leu-54, Tyr-62 to Gln-77, Pro-112 to Tyr-131.	AR033: 12, AR104: 12, AR060: 9, AR089: 8, AR055: 7, AR061: 7, AR053: 6, AR052: 6, AR039: 4, AR096: 4 H0624: 2, H0014: 2, H0622: 2, H0038: 2, H0616: 2, H0661: 1, T0082: 1, H0494: 1, H0538: 1, H0144: 1, S0126: 1, L0743: 1, L0754: 1 and L0758: 1.	131-147
474	HMEGF05	850930	484	427 - 831	1889	Leu-32 to Val-37.	AR055: 6, AR096: 6, AR052: 5, AR060: 4, AR089: 4, AR033: 3, AR039: 3, AR061: 3, AR053: 2, AR104: 1 H0457: 4, S0045: 1, H0586: 1, H0581: 1, H0266: 1, H0628: 1, L0659: 1 and H0519: 1.	66-90, 1-19, 36-54, 97-113
475	HPTVF17	850963	485	230 - 691	1890	Glu-8 to Thr-13, Glu-18 to Pro-25, Ser-48 to Val-55.	AR052: 10, AR053: 10, AR055: 9, AR033: 6, AR061: 5, AR060: 5, AR039: 5, AR089: 5, AR104: 4, AR096: 4 S0420: 1, H0424: 1, 1, H0445: 1, H0595: 1, L0592: 1, S0192: 1 and S0242: 1.	93-111

| 476 | HDLBF57 | 851303 | 486 | 19 - 561 | 1891 | Glu-40 to Gln-48. | S0144: 1 and L0595: 1. AR033: 8, AR053: 7, AR089: 6, AR052: 6, AR055: 5, AR039: 5, AR060: 4, AR096: 4, AR061: 3, AR104: 3 L0157: 4, H0038: 4, H0013: 3, L0766: 3, S0354: 2, H0545: 2, L0794: 2, L0783: 2, L0665: 2, H0144: 2, L0756: 2, L0777: 2, L0593: 2, L0595: 2, H0665: 2, H0656: 1, H0484: 1, H0254: 1, H0125: 1, S0356: 1, S6026: 1, H0485: 1, H0618: 1, H0318: 1, S0388: 1, H0266: 1, H0039: 1, H0673: 1, H0412: 1, L0770: 1, L0769: 1, L0761: 1, L0803: 1, L0653: 1, L0382: 1, L0792: 1, S0052: 1, H0690: 1, H0658: 1, H0539: 1, S3014: 1, S0028: 1, L0779: 1, L0758: 1 and L0759: 1. | 133-165, 1-22, 57-75, 92-108 |
| 477 | HE8QT62 | 851311 | 487 | 1129 - 1530 | 1892 | Ser-31 to Gln-44, Ser-91 to Gln-96. | AR052: 11, AR055: 9, AR061: 7, AR053: 6, AR033: 6, AR096: 6, AR060: 6, AR089: 5, | 56-74 |

478	HE9FI33	851342	488	45 - 416	1893	Arg-65 to His-70	AR104: 3, AR039: 2 H0013: 3, H0090: 2, S0002: 2, H0144: 2, H0161: 1, S0134: 1, S0418: 1, S0360: 1, H0580: 1, S0045: 1, S0222: 1, H0244: 1, H0575: 1, H0039: 1, H0032: 1, H0616: 1, H0063: 1, S0142: 1, H0529: 1, L0372: 1, L0803: 1, L0790: 1, L0791: 1, H0521: 1, L0593: 1, S0242: 1, H0543: 1 and H0423: 1. / AR055: 7, AR052: 4, AR053: 4, AR060: 4, AR061: 4, AR033: 3, AR089: 3, AR096: 3, AR104: 3, AR039: 2 L0749: 2, H0144: 1 and L0748: 1.	3-27, 93-118, 32-49, 73-89
479	HOUBJ40	851343	489	48 - 506	1894	Lys-42 to Gly-48, Asp-71 to Pro-76, Tyr-84 to Met-91.	AR055: 9, AR052: 7, AR060: 6, AR053: 6, AR033: 5, AR061: 5, AR096: 5, AR089: 5, AR039: 3, AR104: 3 L0666: 2, L0779: 2, S0040: 1, S0442: 1, H0634: 1, L0643: 1, L0804: 1, L0775: 1, L0809: 1, H0144: 1.	101-117

480	HHEVC06	851355	490	566 - 1060	1895	Pro-58 to His-69, Glu-132 to Asn-138.	1, L0777: 1 and L0752: 1. AR096: 9, AR089: 7, AR052: 6, AR053: 6, AR039: 4, AR060: 4, AR104: 4, AR033: 2, AR055: 2, AR061: 1 L0526: 1, H0144: 1, L0748: 1 and H0543: 1.	7-23, 106-122, 139-155
481	HE8FS36	851478	491	118 - 456	1896		AR039: 7, AR055: 7, AR096: 6, AR033: 6, AR052: 5, AR060: 5, AR089: 5, AR053: 5, AR061: 3, AR104: 3 L0766: 2, L0759: 2, H0580: 1, H0611: 1, H0013: 1, S0474: 1, H0057: 1, H0268: 1, H0413: 1, L0655: 1, L0748: 1, L0756: 1, H0595: 1 and L0594: 1.	40-68, 1-24, 76-92
482	HE2SS47	851581	492	610 - 942	1897		AR089: 1, AR053: 1, AR060: 0, AR061: 0, AR055: 0, AR096: 0, AR039: 0, AR033: 0, AR052: 0 S0001: 2, H0624: 1, H0255: 1, S0428: 1, S0152: 1, S0028: 1, S0031: 1 and S0260: 1.	71-108, 68-84
483	HTELD06	851722	493	243 -	1898	Tyr-25 to Val-30.	AR089: 12, AR033: 12,	156-172

484	HDPJH06	851787	494	551 - 916	1899		
				860			93-109
					Thr-2 to Val-8, Leu-43 to Glu-48, Lys-53 to Gln-61.	AR052: 11, AR060: 10, AR096: 8, AR053: 7, AR104: 5, AR039: 5, AR061: 4, AR055: 3 H0616: 2, L0665: 2, L0779: 2, H0624: 1, H0156: 1, L0766: 1, L0803: 1, L0517: 1, L0367: 1, L0792: 1, L0663: 1, L0748: 1, L0754: 1 and L0758: 1.	AR096: 5, AR052: 5, AR039: 5, AR053: 4, AR089: 3, AR033: 3, AR060: 3, AR104: 3, AR055: 2, AR061: 1 S0003: 4, L0756: 4, H0521: 3, H0171: 2, H0014: 2, S0214: 2, L0748: 2, L0747: 2, L0755: 2, H0581: 1, H0263: 1, L0471: 1, H0266: 1, H0328: 1, H0615: 1, H0553: 1, H0032: 1, H0591: 1, H0038: 1, H0100: 1, H0494: 1, S0422: 1, S0002: 1, L0773: 1, L0766: 1, L0375: 1, L0776: 1, L0527: 1, L0659: 1, H0520: 1, H0478: 1, L0750: 1, L0779: 1, L0759: 1, S0031: 1, L0591: 1 and S0026: 1.

485	HDTKS69	851859	495	35 - 349	1900		AR033: 10, AR061: 8, AR060: 6, AR089: 4, AR055: 1, AR104: 1, AR096: 1, AR052: 0, AR053: 0, AR039: 0 L0439: 3, H0052: 2, S6028: 2, L0792: 2, H0486: 1, S0346: 1, L0471: 1, S0016: 1, L0776: 1, L0659: 1, L0438: 1 and H0539: 1.		2-30, 70-89, 41-58
486	HE6CH89	852568	496	132 - 527	1901	Lys-78 to Glu-88, Ser-93 to Glu-102, Ser-109 to Cys-117, Arg-126 to Gln-132.	AR052: 4, AR060: 2, AR033: 2, AR089: 1, AR096: 1, AR053: 1, AR104: 1, AR055: 1, AR061: 1, AR039: 0 L0748: 7, L0659: 3, L0747: 3, S0212: 2, S0010: 2, H0132: 2, L0764: 2, L0744: 2, L0752: 2, L0759: 2, S0424: 2, H0170: 1, S0116: 1, S0358: 1, S6016: 1, H0587: 1, H0575: 1, H0421: 1, H0041: 1, H0050: 1, L0471: 1, H0375: 1, H0615: 1, H0039: 1, H0674: 1, H0100: 1, H0625: 1, H0654: 1, H0529: 1, L0364: 1, L0636: 1, L0526: 1, L0783: 1, L0532: 1, L0663: 1, L0665: 1, H0724: 1,		57-79, 30-49

355

487	HDPGS20	852676	497	18 - 833	1902	Pro-36 to Gln-42, Cys-73 to Ser-86.	H0658: 1, H0660: 1, H0521: 1, H0522: 1, S0406: 1 and L0740: 1. AR089: 1, AR033: 1, AR053: 1, AR055: 1, AR060: 1, AR096: 1, AR061: 0, AR039: 0, AR104: 0, AR052: 0 H0521: 7, S0022: 6, L0770: 6, L0769: 6, L0758: 5, S0051: 4, L0747: 4, L0756: 4, H0638: 3, H0124: 3, L0794: 3, L0805: 3, S0278: 2, S0222: 2, H0052: 2, H0327: 2, H0100: 2, L0789: 2, L0438: 2, L0439: 2, L0751: 2, L0777: 2, L0591: 2, S0282: 1, S0356: 1, L0717: 1, H0441: 1, H0587: 1, L0163: 1, H0051: 1, S0048: 1, H0594: 1, H0328: 1, L0455: 1, S0036: 1, S0038: 1, S0344: 1, L0761: 1, L0775: 1, L0375: 1, L0776: 1, L0659: 1, L0809: 1, L0647: 1, H0522: 1, L0750: 1, L0753: 1, H0445: 1 and L0366: 1.	210-237, 41-73, 84-110, 238-257
488	HWBBZ12	852760	498	3509 -	1903	Ile-37 to Phe-45,	AR055: 6, AR060: 4,	79-97

356

489	HDPBI36	852845	499	59 - 607	1904		
						Lys-57 to Lys-65, Gln-72 to Glu-81, Lys-88 to Lys-93, Tyr-147 to Glu-156.	AR053: 2, AR039: 2, AR052: 1, AR060: 1, AR089: 1, AR096: 1, AR061: 1, AR055: 0, AR033: 0, AR104: 0 L0731: 14, L0756: 9, H0521: 6, L0758: 6, L0759: 6, H0556: 5, L0659: 5,
				2913		Leu-109 to Glu-118, Ser-169 to Ser-178.	AR096: 4, AR052: 3, AR061: 2, AR053: 2, AR104: 1, AR033: 1, AR089: 0, AR039: 0 L0766: 9, L0794: 6, L0439: 6, L0731: 5, L0779: 4, L0717: 3, H0622: 2, S0422: 2, L0740: 2, L0756: 2, L0595: 2, H0402: 1, S0420: 1, S0444: 1, H0580: 1, H0208: 1, S0278: 1, H0261: 1, S0222: 1, H0497: 1, H0574: 1, L0471: 1, H0641: 1, L0646: 1, L0764: 1, L0773: 1, L0803: 1, L0804: 1, L0526: 1, L0783: 1, L0791: 1, L0664: 1, L0665: 1, H0520: 1, H0521: 1, H0522: 1, H0696: 1, H0436: 1, L0777: 1, L0755: 1, L0759: 1, H0595: 1, L0604: 1 and H0422: 1.
							120-148, 100-121, 158-175

357

L0783: 5, H0659: 4, S0360: 3, H0413: 3, L0598: 3, L0770: 3, L0791: 3, L0665: 3, S0126: 3, S0378: 3, L0755: 3, H0624: 2, H0171: 2, S0358: 2, H0580: 2, H0645: 2, T0060: 2, H0156: 2, H0042: 2, H0263: 2, H0046: 2, S0003: 2, H0591: 2, H0616: 2, H0641: 2, H0646: 2, S0344: 2, L0369: 2, L0662: 2, L0776: 2, L0663: 2, S0027: 2, L0779: 2, H0667: 2, S0192: 2, H0543: 2, H0422: 2, H0170: 1, H0713: 1, S0114: 1, S0134: 1, H0583: 1, H0341: 1, S0212: 1, H0661: 1, S0418: 1, S0444: 1, S0408: 1, S0468: 1, S0045: 1, S0476: 1, H0639: 1, L0717: 1, H0411: 1, H0441: 1, H0370: 1, H0331: 1, H0574: 1, H0075: 1, H0581: 1, H0052: 1, H0123: 1, S0050: 1, H0014: 1, T0010: 1, H0266: 1, S0250: 1, H0644: 1, L0142: 1, H0628: 1, H0617: 1, H0032: 1, H0383: 1, H0169: 1, S0036: 1,

490	HMAEP64	852960	500	167 - 952	1905			
					Glu-167 to Met-172, Pro-208 to Arg-218, Arg-243 to Ser-253, Ser-255 to Gly-262.	H0551: 1, T0067: 1, H0380: 1, H0264: 1, H0412: 1, H0625: 1, S0142: 1, L0762: 1, L0763: 1, L0641: 1, L0773: 1, L0768: 1, L0766: 1, L0803: 1, L0650: 1, L0523: 1, L0806: 1, L0653: 1, L0526: 1, L0519: 1, L0647: 1, L0789: 1, L0790: 1, L0666: 1, L0664: 1, S0374: 1, L0438: 1, H0519: 1, H0689: 1, H0690: 1, H0670: 1, H0666: 1, L0602: 1, S0152: 1, H0696: 1, S0146: 1, H0555: 1, H0576: 1, S0037: 1, S3014: 1, L0744: 1, L0439: 1, L0740: 1, L0754: 1, L0750: 1, L0786: 1, L0752: 1, L0757: 1, S0436: 1, L0591: 1, S0026: 1, H0136: 1, S0242: 1, S0276: 1, S0196: 1, H0423: 1 and H0293: 1.	AR061: 9, AR089: 5, AR060: 5, AR033: 5, AR055: 5, AR052: 4, AR096: 4, AR039: 3, AR053: 2, AR104: 2 S0278: 3, H0641: 3, S0142: 3, H0521: 3, H0271:	48-74, 218-241, 91-110, 173-191, 146-162

359

| 491 | HTYSK68 | 852980 | 501 | 38 - 454 | 1906 | Lys-2 to Glu-21, Lys-34 to Ser-42, Ile-118 to Pro-123. | 2, L0770: 2, L0794: 2, L0748: 2, L0777: 2, L0599: 2, H0583: 1, H0650: 1, H0657: 1, H0656: 1, H0663: 1, H0638: 1, S0358: 1, S0376: 1, H0545: 1, S0388: 1, H0594: 1, S0144: 1, S0344: 1, L0763: 1, L0646: 1, L0648: 1, L0767: 1, L0766: 1, L0650: 1, L0775: 1, L0787: 1, L0664: 1, S0216: 1, H0576: 1, H0727: 1, L0756: 1, L0757: 1, S0260: 1 and S0436: 1. | | 97-113 |
| 492 | HDAAD50 | 852987 | 502 | 73 - | 1907 | Ala-25 to Gly-32. | AR033: 2, AR104: 2, AR055: 2, AR039: 2, AR060: 1, AR052: 1, AR061: 1, AR089: 1, AR053: 1, AR096: 0 L0663: 2, L0439: 2, L0731: 2, H0663: 1, H0497: 1, H0486: 1, H0124: 1, S0036: 1, H0116: 1, H0623: 1, L0633: 1, L0783: 1, L0438: 1, H0547: 1, H0670: 1, S0404: 1, L0748: 1, L0747: 1, L0485: 1, H0667: 1 and H0422: 1. AR052: 6, AR096: 5, | | 154-171, |

493	HNTNC03	853174	503	28 - 408	1908	Trp-22 to Arg-30, Lys-120 to Glu-127.		1335		6-22
						AR089: 5, AR033: 5, AR053: 4, AR039: 3, AR060: 3, AR061: 2, AR104: 2, AR055: 2 L0439: 9, L0766: 7, H0251: 5, L0740: 5, L0803: 4, L0794: 3, L0665: 3, H0445: 3, H0156: 2, L0764: 2, L0655: 2, L0518: 2, L0809: 2, L0754: 2, L0747: 2, L0756: 2, L0777: 2, L0759: 2, L0362: 2, S0424: 2, H0171: 1, H0638: 1, S0360: 1, H0580: 1, S0046: 1, H0351: 1, S6014: 1, H0586: 1, H0497: 1, H0574: 1, L0021: 1, S0010: 1, H0596: 1, S0036: 1, H0090: 1, H0591: 1, H0509: 1, L0662: 1, L0768: 1, L0650: 1, L0775: 1, L0806: 1, L0659: 1, H0144: 1, H0702: 1, S0374: 1, H0435: 1, H0648: 1, H0672: 1, H0521: 1, L0752: 1, L0758: 1, S0260: 1, H0667: 1, H0423: 1 and L0465: 1.	AR096: 8, AR039: 6, AR089: 6, AR104: 5, AR060: 4, AR033: 3,			93-121, 56-73, 36-52

494	HCFNG65	853186	504	42 - 908	1909			56-73, 225-241
					AR053: 3, AR052: 3, AR055: 2, AR061: 1 L0748: 4, S0358: 2, L0754: 2, L0756: 2, L0758: 2, H0222: 1, S0212: 1, H0580: 1, H0351: 1, T0039: 1, H0590: 1, H0318: 1, T0071: 1, H0015: 1, S6028: 1, S0036: 1, T0069: 1, H0130: 1, H0646: 1, L0646: 1, L0773: 1, L0662: 1, L0766: 1, L0803: 1, L0666: 1, L0665: 1, H0520: 1, H0547: 1, S0136: 1, H0521: 1, H0696: 1, S0028: 1, L0743: 1, L0745: 1, L0750: 1, L0777: 1, L0759: 1, S0434: 1 and L0596: 1.			
					AR039: 2, AR096: 1, AR089: 1, AR104: 1, AR033: 1, AR052: 0, AR061: 0, AR060: 0, AR053: 0, AR055: 0 L0748: 12, L0766: 11, L0439: 8, L0803: 7, S0136: 6, L0758: 4, L0438: 3, L0751: 3, L0749: 3, H0624: 2, H0318: 2, H0014: 2, H0553: 2, S0422: 2, L0794: 2, L0663: 2, H0144: 2,			

495	HLMMI85	853213	505	787 - 311	1910	Asp-22 to Gln-30, Lys-80 to Gly-91.	AR055: 9, AR052: 6, AR096: 6, AR060: 6, AR061: 6, AR033: 5, AR089: 4, AR053: 4, AR104: 3, AR039: 3 H0483: 1, H0255: 1, H0600: 1, H0310: 1, L0766: 1, H0436: 1 and H0543: 1.	138-155, 119-135
496	HBGMZ39	853966	506	87 - 590	1911	Arg-17 to Phe-28, Asp-35 to Asp-43, Gly-53 to Ala-60, Gln-127 to Trp-134, Val-156 to Lys-165.	AR039: 21, AR033: 18, AR089: 16, AR052: 14, AR055: 14, AR053: 13, AR096: 11, AR060: 10, AR104: 10, AR061: 10 H0617: 9, L0763: 6, L0754: 2, H0483: 1, L0789: 1 and L0743: 1.	90-107

Additional data associated with row 495:

H0555: 2, S3014: 2, L0744: 2, L0747: 2, L0485: 2, H0423: 2, H0171: 1, H0657: 1, S0358: 1, H0637: 1, S0050: 1, H0028: 1, H0412: 1, L0351: 1, L0475: 1, H0633: 1, L0662: 1, L0655: 1, L0659: 1, L0518: 1, L0793: 1, L0666: 1, L0664: 1, S0328: 1, S0380: 1, S0350: 1, H0521: 1, H0704: 1, L0743: 1, L0759: 1 and H0668: 1.

497	HHEIA70	854202	507	298 - 831	1912			100-120
					Asp-9 to Ser-18, Ala-27 to Asn-34, Val-63 to Leu-69, Thr-91 to Thr-103, Lys-143 to Asn-148, Thr-160 to Ile-173.	AR039: 39, AR053: 29, AR096: 27, AR052: 25, AR033: 20, AR104: 16, AR089: 10, AR060: 9, AR055: 8, AR061: 5 L0754: 6, S0422: 5, H0547: 5, L0471: 4, L0750: 4, L0362: 4, S0360: 3, H0318: 3, H0581: 3, S0003: 3, H0646: 3, L0740: 3, L0758: 3, H0542: 3, H0265: 2, H0556: 2, H0341: 2, H0497: 2, S6028: 2, H0090: 2, H0591: 2, H0494: 2, L0770: 2, L0655: 2, L0663: 2, S0428: 2, H0144: 2, H0659: 2, H0658: 2, H0672: 2, H0521: 2, L0439: 2, L0777: 2, L0752: 2, L0755: 2, L0731: 2, L0599: 2, L0608: 2, H0422: 2, H0686: 1, S0040: 1, S6024: 1, H0661: 1, H0663: 1, H0638: 1, S0420: 1, S0354: 1, S0358: 1, S0408: 1, S0476: 1, L0717: 1, H0261: 1, H0549: 1, H0455: 1, H0586: 1, L0586: 1, H0635: 1, S0010: 1, H0569: 1, H0620: 1, H0350: 1, H0201: 1,		

| 498 | HNTNA78 | 854267 | 508 | 179 - 538 | 1913 | Asn-83 to Lys-88, Ala-113 to Glu-119. | S0051: 1, H0179: 1, H0271: 1, S0214: 1, H0644: 1, H0628: 1, H0616: 1, H0264: 1, S0352: 1, S0440: 1, H0641: 1, S0344: 1, H0529: 1, L0520: 1, L0763: 1, L0769: 1, L0667: 1, L0772: 1, L0373: 1, L0646: 1, L0521: 1, L0768: 1, L0649: 1, L0775: 1, L0806: 1, L0652: 1, L0807: 1, L0657: 1, L0659: 1, L0647: 1, L0792: 1, S0053: 1, H0702: 1, S0122: 1, H0648: 1, H0539: 1, S0152: 1, H0522: 1, H0696: 1, S0406: 1, H0626: 1, L0751: 1, L0747: 1, L0756: 1, L0779: 1, L0759: 1, S0031: 1, S0260: 1, H0445: 1, L0592: 1, L0601: 1, H0423: 1, H0506: 1 and H0352: 1. AR039: 5, AR096: 3, AR033: 3, AR053: 3, AR060: 3, AR089: 3, AR104: 3, AR055: 2, AR052: 2, AR061: 1 H0351: 11, L0439: 5, H0090: 3, H0616: 3, L0803: 3, L0777: 3, S0222: 2, | 51-69, 96-112 |

| 499 | HOVAN91 | 854277 | 509 | 288 - 605 | 1914 | Pro-57 to Trp-62 | H0013: 2, H0318: 2, H0032: 2, L0794: 2, L0766: 2, L0806: 2, L0659: 2, L0565: 2, H0436: 2, L0740: 2, H0170: 1, H0341: 1, S0001: 1, H0671: 1, H0663: 1, H0675: 1, H0550: 1, H0486: 1, H0590: 1, H0196: 1, H0596: 1, N0006: 1, H0569: 1, L0471: 1, S0003: 1, H0428: 1, H0031: 1, H0211: 1, H0591: 1, H0551: 1, H0560: 1, H0652: 1, L0638: 1, L0646: 1, L0662: 1, L0804: 1, L0650: 1, L0776: 1, L0655: 1, L0606: 1, L0636: 1, L0809: 1, L0792: 1, L0666: 1, S0148: 1, L0438: 1, H0520: 1, H0435: 1, H0659: 1, S0406: 1, S0028: 1, L0750: 1, L0779: 1, L0752: 1, L0755: 1, L0731: 1, L0758: 1, S0031: 1, S0260: 1, S0242: 1 and H0422: 1. AR039: 7, AR096: 5, AR052: 4, AR104: 4, AR033: 3, AR053: 3, AR089: 3, AR055: 3, AR060: 3, AR061: 2 | 73-89, 26-42 |

500	HLYER32	854463	510	774 - 442	1915		L0438: 6, L0439: 6, L0776: 5, H0428: 4, L0805: 4, H0687: 3, L0770: 3, H0651: 3, L0789: 2, L0756: 2, L0758: 2, L0361: 2, S0212: 1, S0001: 1, H0351: 1, H0052: 1, H0327: 1, H0178: 1, L0769: 1, L0767: 1, L0794: 1, L0807: 1, L0759: 1 and L0608: 1.	AR096: 4, AR052: 3, AR033: 2, AR104: 2, AR061: 2, AR053: 2, AR089: 1, AR060: 1, AR055: 1, AR039: 0 L0805: 3, L0776: 3, L0766: 2, L0748: 2, L0747: 2, L0750: 2, L0485: 2, S0001: 1, L0534: 1, S0360: 1, H0580: 1, S6014: 1, H0036: 1, S0051: 1, H0188: 1, H0379: 1, S0440: 1, L0761: 1, L0800: 1, L0651: 1, L0659: 1, L0517: 1, L0787: 1, H0593: 1, S0260: 1 and H0445: 1.			69-85
501	HFPEL47	854659	511	98 - 604	1916	Leu-46 to Trp-52, Glu-90 to Arg-96, Leu-151 to Asp-159.		AR055: 3, AR060: 3, AR033: 2, AR061: 2, AR089: 2, AR052: 2,	Xp22.1-p21.3	300018, 300075, 300077,	106-135

502	HTPIJ41	854779	512	551 - 1507	1917		
					Pro-87 to Tyr-99, Pro-102 to Tyr-117, Arg-144 to Trp-150, Phe-164 to Ile-180, Trp-293 to Tyr-307.	AR052: 16, AR089: 15, AR053: 13, AR039: 12, AR033: 10, AR060: 9, AR061: 4, AR096: 1, AR104: 1, AR055: 0 L0777: 4, H0635: 3, L0775: 3, L0731: 3, L0758: 3, S0276: 3, H0170: 2, L0470: 2, H0013: 2, H0575: 2, H0046: 2, H0622: 2, H0634: 2, L0766: 2, L0783: 2, L0809: 2, L0664: 2,	303200, 301200, 301220, 302350, 306000, 306000, 306100, 307030, 307800, 309470, 309510, 309585, 311770, 312040, 312170, 312612, 312700, 313400
						AR053: 2, AR096: 1, AR104: 1, AR039: 1 S0222: 1	245-262, 207-223

503	HNTNC49	855013	513	40 - 1020	1918		
					Arg-80 to Gly-86, Gly-103 to Leu-110.	AR039: 26, AR053: 18, AR052: 18, AR089: 17, AR096: 16, AR104: 16, AR033: 16, AR060: 13, AR055: 9, AR061: 5, L0769: 10, L0659: 10, L0766: 7, L0748: 7, L0747: 7, L0750: 7, L0665: 6,	236-252
							S0328: 2, S0152: 2, S3014: 2, L0439: 2, L0740: 2, L0747: 2, L0779: 2, L0599: 2, H0638: 1, H0411: 1, H0550: 1, H0069: 1, H0427: 1, L0021: 1, S0010: 1, L0105: 1, H0309: 1, H0572: 1, H0083: 1, S0003: 1, S0214: 1, H0169: 1, H0674: 1, H0561: 1, S0464: 1, H0647: 1, S0210: 1, L0369: 1, L0769: 1, L0764: 1, L0648: 1, L0662: 1, L0768: 1, L0803: 1, L0806: 1, L0790: 1, H0520: 1, S0126: 1, S0122: 1, H0521: 1, H0522: 1, S0044: 1, S0406: 1, H0436: 1, S3012: 1, L0754: 1, L0745: 1, L0746: 1, L0750: 1, L0780: 1, L0759: 1, L0601: 1, S0192: 1 and S0424: 1.	

L0743: 6, L0779: 6, L0754:
5, L0758: 5, L0761: 4,
L0771: 4, L0662: 4, L0731:
4, H0620: 3, T0006: 3,
H0617: 3, L0520: 3, L0774:
3, L0776: 3, L0809: 3,
L0439: 3, L0777: 3, L0595:
3, H0657: 2, H0580: 2,
H0156: 2, H0618: 2, H0253:
2, H0081: 2, L0471: 2,
H0012: 2, S0366: 2, S0038:
2, H0130: 2, L0770: 2,
L0768: 2, L0794: 2, L0806:
2, L0805: 2, L0657: 2,
L0666: 2, L0663: 2, H0672:
2, H0539: 2, H0696: 2,
L0740: 2, L0752: 2, L0759:
2, S0031: 2, L0599: 2,
H0543: 2, H0295: 1, S0116:
1, H0341: 1, H0402: 1,
H0305: 1, H0589: 1, H0638:
1, S0418: 1, S0356: 1,
S0358: 1, S0360: 1, H0208:
1, H0619: 1, H0441: 1,
H0455: 1, H0587: 1, H0333:
1, L0623: 1, H0486: 1,
L0021: 1, H0599: 1, H0108:
1, H0042: 1, S0010: 1,
H0581: 1, H0546: 1, H0545:
1, H0046: 1, H0050: 1,

504	HLTCO94	855239	514	238 - 612	1919	Ser-2 to Tyr-8.	H0057: 1, H0266: 1, H0188: 1, H0687: 1, H0039: 1, H0622: 1, H0424: 1, H0181: 1, H0383: 1, H0166: 1, H0673: 1, H0135: 1, H0090: 1, H0038: 1, H0087: 1, T0067: 1, H0623: 1, H0100: 1, S0112: 1, T0041: 1, H0494: 1, H0560: 1, L0763: 1, L0638: 1, L0373: 1, L0646: 1, L0800: 1, L0642: 1, L0643: 1, L0644: 1, L0764: 1, L0649: 1, L0386: 1, L0804: 1, L0650: 1, L0651: 1, L0540: 1, L0542: 1, L0783: 1, L0545: 1, L0367: 1, L0789: 1, L0792: 1, L0664: 1, L0438: 1, H0520: 1, H0547: 1, H0689: 1, H0670: 1, H0651: 1, S0380: 1, H0436: 1, L0744: 1, L0749: 1, L0756: 1, L0780: 1, L0755: 1, H0445: 1, H0595: 1, L0596: 1, L0591: 1 and L0608: 1. AR052: 18, AR053: 14, AR033: 7, AR096: 7, AR089: 6, AR060: 5, AR104: 5, AR055: 5, AR039: 3, AR061: 3	81-100, 13-29

H0694: 121, L0749: 14,
L0439: 10, S0192: 9,
H0656: 7, L0750: 7, L0731:
6, S0152: 5, L0740: 5,
L0794: 4, L0747: 4, H0052:
3, S0003: 3, L0770: 3,
L0769: 3, L0764: 3, L0803:
3, L0776: 3, L0438: 3,
S0026: 3, H0341: 2, S0376:
2, S0408: 2, L0471: 2,
H0014: 2, H0510: 2, L0598:
2, L0763: 2, L0765: 2,
L0662: 2, L0388: 2, L0774:
2, L0805: 2, L0809: 2,
L0789: 2, H0670: 2, L0502:
2, S0028: 2, L0751: 2,
L0779: 2, L0752: 2, L0757:
2, H0542: 2, H0423: 2,
H0422: 2, H0171: 1, H0686:
1, S0114: 1, T0049: 1,
H0657: 1, H0661: 1, H0402:
1, S0444: 1, S0360: 1,
S0222: 1, H0441: 1, H0442:
1, H0497: 1, H0574: 1,
L0021: 1, H0575: 1, H0581:
1, T0115: 1, H0569: 1,
S0051: 1, H0083: 1, H0375:
1, S0214: 1, H0328: 1,
H0039: 1, H0644: 1, H0090:
1, H0616: 1, H0623: 1,

505	HBIMT77	855274	515	336 - 743	1920		
					Lys-8 to Gly-15, Arg-29 to Ala-34, Asp-65 to Pro-70.	H0059: 1, H0100: 1, S0142: 1, S0002: 1, L0369: 1, L0637: 1, L0646: 1, L0771: 1, L0363: 1, L0766: 1, L0649: 1, L0381: 1, L0804: 1, L0654: 1, L0606: 1, L0659: 1, L0783: 1, L0544: 1, L0663: 1, S0374: 1, L0352: 1, H0520: 1, H0547: 1, H0683: 1, H0660: 1, S0328: 1, H0539: 1, H0522: 1, L0742: 1, L0748: 1, L0756: 1, L0777: 1, L0758: 1, L0759: 1, H0445: 1, S0434: 1, S0436: 1, L0599: 1, L0601: 1, H0653: 1 and H0543: 1.	42-62
						AR053: 4, AR033: 2, AR089: 2, AR055: 1, AR096: 1, AR104: 1, AR061: 1, AR060: 1, AR039: 0, AR052: 0 L0758: 6, L0794: 4, L0764: 3, L0809: 3, S0360: 2, H0253: 2, H0196: 2, H0052: 2, H0150: 2, H0024: 2, H0424: 2, H0606: 2, L0770: 2, L0803: 2, H0547: 2, H0593: 2, L0747: 2, L0759: 2, L0485: 2, S6024:	

| 506 | HTLIV70 | 855314 | 516 | 94 - 1047 | 1921 | Asp-36 to Ser-42. | 1, H0657: 1, H0341: 1, H0402: 1, S0046: 1, H0549: 1, H0608: 1, H0587: 1, H0618: 1, H0546: 1, H0123: 1, H0081: 1, H0099: 1, H0271: 1, H0328: 1, H0124: 1, H0040: 1, H0116: 1, L0475: 1, L0761: 1, L0646: 1, L0662: 1, L0363: 1, L0806: 1, L0635: 1, L0790: 1, S0330: 1, H0521: 1, L0611: 1, L0439: 1, L0751: 1 and L0749: 1. AR039: 18, AR033: 17, AR089: 15, AR052: 14, AR055: 13, AR053: 13, AR061: 9, AR096: 9, AR060: 8, AR104: 6 H0618: 2, S0031: 2, H0545: 1, S0050: 1, H0031: 1, H0124: 1, H0130: 1, H0646: 1, H0521: 1, S0432: 1, L0601: 1 and L0600: 1. | 73-90, 152-168, 51-67, 270-286, 207-223 |
| 507 | HFADF33 | 855433 | 517 | 532 - 197 | 1922 | Met-1 to His-23, Asp-64 to Ser-79. | AR033: 28, AR052: 22, AR053: 20, AR055: 20, AR089: 19, AR039: 17, AR060: 10, AR096: 10, AR061: 9, AR104: 5 L0439: 29, L0766: 11, | 91-109 |

508	HETJQ73	855453	518	538 - 1269	1923	Met-1 to Pro-7, Leu-55 to Tyr-60, Glu-67 to Leu-77, Arg-110 to Phe-115, Glu-218 to Lys-223.	AR061: 56, AR055: 8, AR089: 6, AR060: 6, AR096: 6, AR052: 5, AR053: 4, AR033: 4, AR104: 3, AR039: 2 H0046: 9, L0766: 8, L0731: 6, L0779: 5, L0800: 4, S0003: 3, S0408: 2, H0494: 2, S0422: 2, L0803: 2, L0804: 2, L0805: 2, L0776: 2, L0655: 2, L0748: 2, L0754: 2, S0412: 2, H0306: 1, S0418: 1, S0444: 1, S0222: 1, H0611: 1, L0163: 1, H0266: 1, S0214: 1, L0483: 1, L0055: 1, L0455: 1, H0038: 1, H0063: 1, H0413: 1, S0440: 1, L0770: 1, L0771: 1, L0521:	L0742: 8, L0769: 6, L0351: 5, S0222: 4, H0052: 4, T0010: 4, S6024: 3, L0768: 3, L0779: 3, L0759: 3, H0455: 2, L0794: 2, L0776: 2, L0438: 2, S0001: 1, L0534: 1, S0049: 1, S0051: 1, S0038: 1, L0763: 1, L0770: 1, L0805: 1, L0745: 1, L0777: 1, L0753: 1 and L0758: 1.	163-202, 134-159, 223-241, 113-131, 199-215, 156-172

375

509	HAGGV44	855714	519	298 - 606	1924		37-55, 60-76, 79-95
						AR055: 10, AR033: 6, AR060: 5, AR089: 5, AR061: 4, AR052: 4, AR053: 4, AR096: 3, AR039: 3, AR104: 3 L0777: 14, L0769: 3, L0803: 3, L0805: 3, L0742: 3, L0439: 3, S0346: 2, L0766: 2, H0658: 2, L0749: 2, L0752: 2, L0407: 1, L0415: 1, S0116: 1, H0306: 1, H0305: 1, H0351: 1, H0441: 1, H0392: 1, H0486: 1, L0586: 1, H0427: 1, S0010: 1, T0048: 1, H0251: 1, L0471: 1, H0687: 1, H0428: 1, H0124: 1, H0413: 1, H0517: 1, L0369: 1, L0638: 1, L0775: 1, L0651: 1, L0806: 1, L0653: 1, L0659: 1, L0790: 1, L0666: 1, L0663: 1, S0126: 1, H0690: 1, H0684: 1, H0658: 1, H0710: 1, H0521: 1, H0478: 1, S0206: 1, L0740: 1, L0751: 1, L0750: 1, L0777: 1, L0758: 1, L0605: 1, L0595: 1, S0192: 1, H0543: 1, H0423: 1 and S0424: 1.	

510	HTTDM15	856108	520	38 - 778	1925	1, L0776: 1, L0518: 1, L0789: 1, L0792: 1, L0438: 1, L0352: 1, S0380: 1, S0188: 1, S0146: 1, H0576: 1, L0740: 1, L0747: 1, L0756: 1, L0779: 1, L0755: 1, L0759: 1, S0260: 1, L0601: 1, S0192: 1 and H0423: 1.	AR052: 12, AR055: 11, AR053: 10, AR089: 9, AR096: 9, AR033: 8, AR060: 8, AR061: 7, AR104: 5, AR039: 5 L0748: 4, H0441: 2, H0333: 2, H0670: 2, H0660: 2, L0439: 2, L0747: 2, L0601: 2, S0218: 1, H0650: 1, H0656: 1, H0254: 1, H0255: 1, H0013: 1, H0327: 1, H0266: 1, H0070: 1, H0040: 1, T0042: 1, L0809: 1, L0790: 1, L0792: 1, H0689: 1, H0435: 1, H0134: 1, L0741: 1, L0759: 1 and S0042: 1.	133-149, 17-33, 109-125
511	HADCY76	856212	521	208 - 567	1926	Glu-40 to Phe-45.	AR104: 1, AR089: 1, AR053: 1, AR096: 1, AR060: 0, AR039: 0,	48-65

#	Clone		Col	Range		Mutation	AR data	Positions
							AR061: 0, AR033: 0, AR052: 0 L0749: 3, H0346: 1, H0370: 1, H0427: 1 and L0439: 1.	52-69, 160-176
512	HDPXW75	856251	522	21 - 548	1927	Ser-4 to Ser-11.	AR039: 3, AR096: 2, AR104: 2, AR089: 2, AR052: 1, AR061: 1, AR053: 0, AR033: 0, AR060: 0, AR055: 0 S0278: 1, H0521: 1 and L0740: 1.	
513	HMCDC50	856301	523	103 - 525	1928	Gly-5 to Asp-11.	AR060: 167, AR055: 164, AR061: 136, AR033: 116, AR039: 97, AR104: 97, AR053: 89, AR089: 83, AR052: 73, AR096: 70 S0142: 4, H0581: 1, S0250: 1 and H0521: 1.	122-138
514	HMADZ55	856326	524	33 - 743	1929	His-11 to Tyr-17.	AR033: 3, AR061: 3, AR053: 3, AR060: 2, AR089: 2, AR104: 2, AR096: 2, AR055: 1, AR039: 0, AR052: 0 S0144: 5, S0278: 3, S0142: 2, S0426: 2, L0665: 2, L0748: 2, H0556: 1, H0583: 1, H0644: 1, H0617: 1, H0606: 1, H0090: 1, S0002:	127-158, 157-185, 106-125, 49-65, 205-221

515	HTXNB76	856497	525	617 - 315	1930	Met-1 to Asn-13.	1, L0770: 1, L0767: 1, L0375: 1, L0659: 1, L0791: 1, H0689: 1, H0518: 1 and L0758: 1. AR096: 2, AR039: 2, AR089: 1, AR053: 1, AR033: 1, AR061: 1, AR060: 1, AR055: 1, AR104: 0, AR052: 0 L0766: 6, L0748: 5, H0556: 3, H0090: 2, L0655: 2, H0580: 1, H0581: 1, L0040: 1, L0055: 1, H0591: 1, H0396: 1, H0641: 1, L0761: 1, L0772: 1, L0794: 1, L0387: 1, L0606: 1, L0666: 1, L0664: 1, H0659: 1, S0378: 1, L0779: 1, H0445: 1 and H0542: 1.	83-101
516	HLWDD49	856506	526	127 - 465	1931	Trp-9 to Gly-24, Gly-27 to Gln-34.	AR096: 1, AR033: 1, AR089: 1, AR060: 1, AR061: 0, AR052: 0, AR039: 0, AR104: 0, AR053: 0, AR055: 0 H0254: 1, H0553: 1, H0429: 1, H0538: 1 and H0520: 1.	87-105
517	HLQGX48	856704	527	921 - 1436	1932	Gly-59 to Pro-68, Gln-87 to Lys-96,	AR039: 30, AR055: 28, AR033: 25, AR053: 19,	21-51, 146-164,

| 518 | H2CBH17 | 856745 | 528 | 335 – 2263 | 1933 | Leu-27 to Ser-35, Pro-64 to Gly-70, Glu-86 to Thr-92, Ser-100 to Glu-105, Arg-135 to Arg-140, Thr-366 to Cys-378, Asp-395 to His-400, Glu-436 to Arg-442, Glu-478 to Asn-486, Ser-530 to Asp-538, Glu-614 to Gly-625, Ile-637 to Leu-643. | AR096: 7, AR033: 7, AR052: 7, AR060: 6, AR053: 5, AR089: 5, AR055: 4, AR104: 4, AR039: 3, AR061: 2, L0438: 9, L0439: 4, H0170: 3, H0615: 3, S0378: 3, L0750: 3, H0553: 2, H0090: 2, H0529: 2, L0764: 2, L0803: 2, L0804: 2, L0775: 2, L0652: 2, L0659: 2, L0809: 2, H0144: 2, S0028: 2, L0748: 2, L0745: 2, L0779: 2, L0777: 2, L0759: 2, L0591: 2, H0624: 1, S0356: 1, S0376: 1, S0360: 1, L0717: 1, S0278: 1, H0369: 1, H0431: 1, | 321-338, 581-598, 459-475, 285-301, 213-229, 177-193 |
| | | | | | Gly-120 to Cys-125. | AR060: 19, AR089: 16, AR052: 15, AR104: 14, AR061: 12, AR096: 12 L0766: 15, L0805: 5, H0632: 2, L0789: 2, L0740: 2, H0395: 1, H0656: 1, H0341: 1, H0574: 1, H0647: 1, S0422: 1, L0761: 1, L0794: 1, L0776: 1, L0515: 1, S0216: 1, H0144: 1, H0682: 1, H0660: 1 and L0755: 1. | 127-143, 69-85 |

519	HLQEF25	856748	529	70 - 432	1934	Pro-17 to Gly-31.				99-121
							H0586: 1, H0574: 1, H0013: 1, H0427: 1, H0122: 1, H0052: 1, T0110: 1, L0118: 1, H0050: 1, H0024: 1, H0051: 1, H0594: 1, S0003: 1, H0031: 1, H0644: 1, H0591: 1, H0038: 1, H0551: 1, H0264: 1, L0435: 1, T0042: 1, H0131: 1, S0142: 1, S0210: 1, L0637: 1, L0772: 1, L0800: 1, L0773: 1, L0794: 1, L0766: 1, L0375: 1, L0657: 1, L0665: 1, H0547: 1, S0126: 1, H0684: 1, H0660: 1, H0672: 1, H0518: 1, S0136: 1, H0436: 1, L0747: 1, L0756: 1, L0752: 1, H0445: 1, L0595: 1, H0667: 1, H0543: 1, L0697: 1 and S0424: 1.	AR055: 6, AR061: 6, AR060: 3, AR053: 3, AR096: 3, AR033: 3, AR089: 2, AR052: 2, AR039: 2, AR104: 1 L0604: 8, L0485: 6, L0748: 5, L0777: 3, S0438: 2, L0809: 2, H0722: 1, H0574: 1, H0041: 1, H0708: 1, S0366: 1, L0747: 1,		

| 520 | HTOHA37 | 856923 | 530 | 12 - 881 | 1935 | L0749: 1, L0780: 1 and L0759: 1.
AR096: 3, AR089: 3, AR055: 3, AR060: 2, AR033: 2, AR053: 2, AR052: 1, AR061: 1, AR104: 1, AR039: 0 H0585: 8, H0265: 3, H0141: 2, S0360: 2, H0251: 2, H0031: 2, H0551: 2, H0529: 2, L0519: 2, L0545: 2, L0664: 2, H0668: 2, S0040: 1, T0049: 1, H0656: 1, H0255: 1, S0376: 1, S0132: 1, H0546: 1, H0375: 1, S0314: 1, H0428: 1, H0039: 1, H0553: 1, L0055: 1, H0264: 1, H0561: 1, H0509: 1, L0643: 1, L0803: 1, L0651: 1, L0378: 1, L0776: 1, L0659: 1, L0790: 1, L0666: 1, H0519: 1, S0126: 1, H0521: 1, H0576: 1, L0777: 1, L0755: 1, L0731: 1, L0757: 1, L0759: 1, H0665: 1, S0194: 1 and S0458: 1. | 41-57, 101-117 |
| 521 | HLHAW26 | 856982 | 531 | 299 - 613 | 1936 | AR055: 12, AR061: 7, AR052: 7, AR060: 7, | 34-51 |

522	HKAAZA46	857100	532	281 - 679	1937	Asn-26 to Asn-31, Ser-67 to Ala-74, Ile-105 to Lys-110.	AR089: 6, AR033: 5, AR096: 5, AR053: 5, AR039: 3, AR104: 3, H0144: 3, H0208: 1, H0369: 1 and H0024: 1.	79-104, 109-127, 47-63
523	HAQAF12	857311	533	45 - 653	1938	Ala-5 to Lys-36, Ser-41 to Leu-80, Gly-98 to Gly-112, Gly-198 to Asp-203.	AR039: 23, AR053: 14, AR096: 11, AR033: 11, AR104: 10, AR052: 9, AR089: 9, AR055: 7, AR060: 7, AR061: 4, H0494: 1	127-150, 160-176
524	HTXEX35	857404	534	263 - 793	1939	Gln-56 to Pro-65, Pro-70 to Asn-76, Gly-85 to Trp-94, Arg-103 to Ser-108.	AR055: 7, AR052: 6, AR053: 5, AR033: 5, AR061: 4, AR096: 4, AR060: 4, AR089: 4, AR039: 3, AR104: 1, L0439: 4, L0748: 3, L0731: 3, H0265: 2, H0015: 2, H0083: 2, H0040: 2, L0764: 2, L0766: 2, L0543: 2, S0027: 2, L0758: 2, L0759: 2, L0604: 2, H0685: 1, H0656: 1, S0360: 1,	134-152

525	HE8TE64	857478	535	151 - 831	1940	Gln-14 to Ala-21, Leu-45 to Arg-51, Arg-54 to Asp-61, Ser-88 to Ile-95, Leu-111 to Gln-117.	S0045: 1, L0717: 1, S0222: 1, H0156: 1, H0575: 1, H0046: 1, H0014: 1, H0266: 1, H0687: 1, H0166: 1, H0674: 1, H0529: 1, L0769: 1, L0645: 1, L0363: 1, L0768: 1, L0806: 1, L0557: 1, L0776: 1, L0789: 1, L0665: 1, L0438: 1, H0682: 1, H0648: 1, L0779: 1, L0752: 1, H0444: 1, L0608: 1, H0668: 1 and H0423: 1.	130-162, 171-187
							AR061: 4, AR033: 3, AR055: 3, AR053: 3, AR060: 2, AR104: 2, AR089: 2, AR039: 1, AR052: 1, AR096: 1 H0013: 1 and S0250: 1.	
526	HL3AC38	857623	536	87 - 872	1941		AR055: 13, AR033: 11, AR053: 10, AR052: 9, AR089: 8, AR060: 8, AR061: 6, AR096: 4, AR104: 4, AR039: 3 S0418: 2, H0046: 2, H0542: 2, H0341: 1, H0421: 1, H0052: 1, L0471: 1, S0022: 1, H0038: 1, H0433: 1, H0560: 1, H0132: 1, S0374: 1, S3014: 1, L0759:	70-87, 119-135

| 527 | HMUAO31 | 857664 | 537 | 11 - 955 | 1942 | Gln-68 to Gln-74. | 1 and S0276: 1.
AR039: 11, AR033: 9,
AR053: 8, AR089: 7,
AR052: 7, AR055: 7,
AR096: 6, AR060: 5,
AR061: 5, AR104: 5
H0494: 12, L0770: 12,
H0657: 11, H0659: 9,
L0774: 8, L0776: 8, H0648:
8, L0755: 8, S0410: 6,
L0769: 6, L0766: 6, L0750:
6, H0638: 5, S0408: 5,
H0559: 5, S0440: 5, L0775:
5, H0520: 5, H0556: 4,
H0341: 4, S0418: 4, S0358:
4, S0376: 4, S0360: 4,
H0617: 4, L0665: 4, L0748:
4, L0777: 4, L0752: 4,
L0759: 4, S0434: 4, S0420:
3, H0253: 3, H0424: 3,
H0616: 3, H0560: 3, L0374:
3, H0144: 3, L0439: 3,
L0740: 3, L0747: 3, L0731:
3, L0758: 3, L0596: 3,
L0601: 3, S0026: 3, S0194:
3, H0170: 2, H0265: 2,
H0685: 2, H0656: 2, L0415:
2, S0444: 2, S0278: 2,
H0550: 2, H0257: 2, T0109:
2, H0156: 2, H0618: 2, | 204-225,
142-158,
82-98, 6-
22 |

H0545: 2, L0471: 2, H0620: 2, H0373: 2, H0083: 2, H0290: 2, H0031: 2, H0040: 2, H0551: 2, H0412: 2, L0065: 2, S0438: 2, H0538: 2, L0763: 2, L0772: 2, L0646: 2, L0644: 2, L0764: 2, L0662: 2, L0518: 2, L0783: 2, L0663: 2, S0374: 2, H0547: 2, H0435: 2, H0658: 2, H0670: 2, S0328: 2, L0753: 2, H0445: 2, H0665: 2, H0542: 2, H0423: 2, H0506: 2, H0624: 1, S0114: 1, S0134: 1, H0583: 1, H0650: 1, S0116: 1, H0255: 1, H0663: 1, H0662: 1, L0481: 1, H0125: 1, S0442: 1, S0354: 1, H0675: 1, H0580: 1, S0046: 1, H0619: 1, H0351: 1, H0437: 1, H0369: 1, H0431: 1, H0370: 1, H0600: 1, H0586: 1, H0587: 1, H0331: 1, H0486: 1, H0069: 1, H0575: 1, S0346: 1, H0705: 1, T0048: 1, S0182: 1, H0318: 1, H0581: 1, S0049: 1, H0052: 1, H0086: 1, H0563: 1, H0123: 1, H0081: 1,

| 528 | HHAWD33 | 857697 | 538 | 407 - 1132 | 1943 | Met-1 to Ser-9, Ser-11 to Val-21, Gln-64 to Pro-69, | H0014: 1, H0510: 1, H0375: 1, H0188: 1, S0022: 1, H0428: 1, H0708: 1, S0366: 1, H0135: 1, H0634: 1, H0063: 1, H0087: 1, H0413: 1, H0623: 1, H0059: 1, S0386: 1, H0100: 1, T0042: 1, L0475: 1, H0386: 1, H0646: 1, L0598: 1, H0529: 1, L0369: 1, L0520: 1, L0762: 1, L0371: 1, L0638: 1, L0373: 1, L0773: 1, L0521: 1, L0363: 1, L0805: 1, L0655: 1, L0517: 1, L0540: 1, L0542: 1, L0526: 1, L0809: 1, L0545: 1, L0647: 1, L0789: 1, L0791: 1, H0691: 1, H0519: 1, H0689: 1, H0690: 1, H0660: 1, H0672: 1, H0651: 1, S0330: 1, H0539: 1, S0378: 1, S0380: 1, H0521: 1, S0406: 1, L0749: 1, L0780: 1, L0757: 1, L0608: 1, L0594: 1, H0668: 1, H0653: 1, H0667: 1, S0242: 1, S0276: 1 and H0422: 1. | AR033: 4, AR052: 3, AR039: 3, AR053: 3, AR104: 3, AR089: 3, | 110-135, 69-85, 47-63 |

529	HTZMB08	857723	539	90 - 404	1944	Thr-88 to Arg-96, Asp-106 to Gly-116.	AR096: 3, AR060: 2, AR055: 2, AR061: 2, L0757: 3, S0410: 2, L0766: 2, L0794: 2, L0766: 2, H0052: 2, L0806: 2, L0809: 2, L0750: 2, L0593: 2, S0418: 1, L0534: 1, S0442: 1, S0408: 1, H0619: 1, H0036: 1, H0318: 1, H0009: 1, H0050: 1, H0051: 1, H0267: 1, L0455: 1, H0316: 1, H0135: 1, H0616: 1, H0412: 1, H0494: 1, S0150: 1, L0763: 1, L0768: 1, L0803: 1, L0804: 1, L0776: 1, L0542: 1, L0789: 1, H0547: 1, S0152: 1, L0740: 1, L0754: 1, L0599: 1, L0594: 1, S0196: 1, H0423: 1 and H0506: 1.	43-59	
530	HJBCE86	857743	540	80 - 1324	1945	Tyr-29 to Thr-34, Pro-87 to Lys-97.	AR060: 2, AR089: 2, AR053: 1, AR061: 1, AR033: 1, AR096: 0, AR104: 0, AR055: 0, AR039: 0, S0001: 1, H0333: 1 and S3020: 1.	AR055: 11, AR052: 10, AR096: 8, AR060: 8,	128-144, 346-362,

531	HFPCK56	857809	541	429 - 869	1946			307-323
							AR104: 8, AR039: 7, AR053: 7, AR089: 7, AR033: 7, AR061: 5 L0748: 4, H0333: 2, L0766: 2, H0556: 1, S0114: 1, S0116: 1, S0360: 1, H0438: 1, H0156: 1, H0599: 1, H0706: 1, H0590: 1, H0135: 1, H0264: 1, T0042: 1, L0783: 1, L0809: 1, L0544: 1, L0666: 1, L0663: 1, S0052: 1, L0439: 1, L0749: 1, S0434: 1, L0595: 1 and S0424: 1.	307-323
531	HFPCK56	857809	541	429 - 869	1946	Pro-2 to His-10, Pro-13 to Gly-19, Ser-23 to Arg-29.	AR096: 13, AR052: 11, AR053: 10, AR033: 10, AR089: 9, AR055: 9, AR104: 8, AR060: 8, AR061: 5, AR039: 5 L0809: 7, H0658: 6, L0748: 6, S0222: 5, L0794: 5, L0776: 5, L0756: 5, L0752: 5, L0731: 5, L0770: 4, L0662: 4, L0743: 4, L0439: 4, L0751: 4, L0754: 4, L0747: 4, L0759: 4, H0013: 3, L0769: 3, L0805: 3, L0789: 3, L0664: 3, L0740: 3, L0777: 3, L0753: 3, L0758: 3, H0333: 2,	27-51, 126-147

389

532	HAPSP72	857844	542	224 -	1947	Lys-99 to Tyr-110,		111-129
						H0052: 2, H0545: 2, H0428: 2, L0483: 2, L0455: 2, H0509: 2, L0763: 2, L0771: 2, L0803: 2, L0804: 2, L0806: 2, L0527: 2, L0783: 2, L0666: 2, L0663: 2, S0152: 2, S0146: 2, L0744: 2, L0745: 2, L0603: 2, H0686: 1, S0116: 1, H0255: 1, S0418: 1, S0408: 1, H0645: 1, H0393: 1, L0717: 1, H0351: 1, H0370: 1, H0574: 1, H0156: 1, H0599: 1, H0590: 1, H0253: 1, H0390: 1, S0049: 1, H0009: 1, H0178: 1, H0071: 1, T0010: 1, H0252: 1, H0615: 1, T0006: 1, H0033: 1, H0424: 1, H0032: 1, H0124: 1, S0142: 1, L0638: 1, L0761: 1, L0641: 1, L0768: 1, L0774: 1, L0775: 1, L0657: 1, L0636: 1, L0517: 1, L0518: 1, L0665: 1, H0144: 1, H0659: 1, H0670: 1, H0660: 1, H0696: 1, H0626: 1, S0432: 1, S0027: 1, L0742: 1, L0750: 1, L0757: 1 and S0011: 1.	AR033: 7, AR055: 6,	

533	HACBM44	857913	543	107 - 490	1948		802			47-66
					Pro-23 to Glu-29, Tyr-39 to Ser-46, Pro-69 to Asp-89, Asp-112 to Pro-117.	AR033: 13, AR096: 9, AR052: 9, AR060: 8, AR089: 8, AR053: 8, AR055: 8, AR061: 5, AR039: 4, AR104: 4 L0770: 10, L0754: 8, L0731: 8, S0358: 6, S0414: 6, H0255: 5, S0022: 4, H0627: 4, L0757: 4, H0657: 3, H0090: 3, H0539: 3, L0755: 3, L0759: 3, S0026: 3, H0556: 2, S0007: 2,	Pro-145 to Leu-152, Pro-177 to Thr-182.	AR052: 6, AR060: 5, AR096: 5, AR053: 5, AR089: 4, AR104: 3, AR061: 3, AR039: 2 L0777: 5, L0766: 3, L0740: 3, L0665: 2, H0521: 2, L0748: 2, L0779: 2, L0752: 2, H0624: 1, S0420: 1, S0442: 1, L0428: 1, H0619: 1, H0431: 1, H0575: 1, H0318: 1, L0719: 1, S0214: 1, H0598: 1, H0591: 1, H0616: 1, S0422: 1, L0770: 1, L0659: 1, H0520: 1, S3014: 1, L0742: 1, L0743: 1, L0744: 1, L0751: 1, L0747: 1, L0756: 1, L0759: 1 and S0242: 1.		

H0438: 2, S0214: 2, H0135: 2, L0764: 2, L0766: 2, L0803: 2, L0804: 2, L0806: 2, L0789: 2, L0663: 2, S0330: 2, L0740: 2, L0747: 2, L0750: 2, L0758: 2, L0596: 2, L0591: 2, S0040: 1, H0656: 1, S0001: 1, H0254: 1, S0418: 1, S0356: 1, H0229: 1, S0046: 1, H0619: 1, H0645: 1, H0550: 1, H0392: 1, H0331: 1, T0039: 1, H0635: 1, H0427: 1, S0280: 1, H0036: 1, S0010: 1, S0049: 1, H0546: 1, H0457: 1, L0471: 1, H0620: 1, H0051: 1, S0051: 1, T0010: 1, H0179: 1, S0250: 1, H0252: 1, L0143: 1, L0455: 1, S0036: 1, H0040: 1, H0616: 1, H0551: 1, H0412: 1, H0059: 1, H0494: 1, S0144: 1, S0142: 1, S0002: 1, L0521: 1, L0662: 1, L0774: 1, L0775: 1, L0809: 1, L0647: 1, H0144: 1, S0374: 1, L0438: 1, H0520: 1, H0593: 1, H0683: 1, H0684: 1, H0660: 1, H0672: 1, H0522: 1,

| 534 | HLTEO24 | 857964 | 544 | 24 - 347 | 1949 | Leu-10 to Tyr-20, Leu-24 to Ser-30. | AR055: 8, AR060: 4, AR052: 4, AR061: 4, AR033: 3, AR053: 3, AR089: 3, AR096: 2, AR104: 2, AR039: 1 H0616: 3, H0619: 1, H0457: 1, H0090: 1, H0038: 1, S0422: 1, L0804: 1 and L0754: 1. | 26-58, 49-65 |
| 535 | HHFJP51 | 857977 | 545 | 72 - 422 | 1950 | Cys-26 to Ser-32, Pro-66 to Arg-77. | AR055: 7, AR060: 6, AR052: 5, AR089: 5, AR033: 5, AR104: 4, AR039: 4, AR053: 4, AR096: 3, AR061: 3 H0124: 13, L0809: 7, L0601: 4, S0358: 2, L0666: 2, H0670: 2, L0439: 2, H0556: 1, S0420: 1, S0442: 1, H0619: 1, H0614: 1, H0587: 1, H0581: 1, H0457: 1, H0078: 1, H0271: 1, H0031: 1, H0617: 1, H0135: 1, L0762: 1, L0769: 1, | 77-95, 100-116 |

S0037: 1, S0028: 1, L0748: 1, L0756: 1, L0777: 1, H0343: 1, L0605: 1, L0485: 1, L0599: 1, L0593: 1, L0366: 1, S0011: 1, H0665: 1 and H0543: 1.

393

| 536 | HHFLL87 | 858001 | 546 | 162 - 842 | 1951 | Arg-17 to Trp-23, Asp-37 to Asp-45, Gln-66 to Gly-75, Ser-137 to Ala-144. | AR033: 19, AR039: 14, AR089: 10, AR055: 9, AR053: 9, AR052: 8, AR096: 6, AR060: 6, AR061: 6, AR104: 4 L0745: 13, L0769: 7, S0036: 6, L0753: 5, S0031: 5, H0052: 4, H0327: 4, H0046: 4, H0051: 4, T0006: 4, L0742: 4, L0746: 4, L0756: 4, L0752: 4, S6024: 3, S0282: 3, H0619: 3, S0388: 3, S0051: 3, L0741: 3, L0749: 3, S0222: 2, S0049: 2, S6028: 2, L0806: 2, L0776: 2, L0438: 2, L0777: 2, S0035: 1, H0662: 1, H0438: 1, L0021: 1, H0575: 1, S0182: 1, H0310: 1, H0009: 1, H0050: 1, T0010: 1, H0399: 1, H0615: | L0373: 1, L0800: 1, L0662: 1, L0363: 1, L0794: 1, L0803: 1, L0774: 1, L0775: 1, L0375: 1, L0655: 1, L0664: 1, L0665: 1, S0374: 1, H0547: 1, H0682: 1, H0658: 1, S0152: 1, L0747: 1, L0779: 1, L0596: 1 and L0592: 1. | 172-190, 197-213 |

| 537 | HCUDR30 | 858010 | 547 | 33 - 542 | 1952 | Leu-69 to Asp-76. | 1, H0604: 1, L0456: 1, L0763: 1, L0770: 1, L0630: 1, L0381: 1, L0774: 1, L0775: 1, L0805: 1, L0659: 1, L0788: 1, H0689: 1, H0684: 1, H0670: 1, H0134: 1, H0478: 1, L0612: 1, L0743: 1, L0747: 1, L0779: 1, L0758: 1, S0260: 1 and L0366: 1. | AR096: 2, AR033: 2, AR055: 2, AR053: 1, AR104: 1, AR089: 1, AR061: 1, AR060: 1, AR039: 0, AR052: 0 H0553: 2, T0049: 1, H0656: 1, H0402: 1, H0125: 1, S0045: 1, H0619: 1, H0586: 1, T0114: 1, H0581: 1, H0628: 1, H0551: 1, S0310: 1, H0520: 1, H0539: 1, H0521: 1, L0779: 1, S0434: 1 and L0485: 1. | 89-105, 1-17 |
| 538 | HHFHI24 | 858020 | 548 | 75 - 431 | 1953 | Pro-30 to His-50. | | AR039: 2, AR055: 1, AR061: 1, AR104: 1, AR060: 0, AR089: 0, AR033: 0, AR096: 0, AR052: 0, AR053: 0 L0749: 3, H0341: 1 and | 81-97 |

395

539	HSIAI48	858030	549	163 - 573	1954	H0050: 1. AR104: 513, AR061: 376, AR055: 327, AR060: 253, AR033: 188, AR089: 172, AR039: 115, AR053: 110, AR052: 101, AR096: 87, H0036: 1, H0050: 1 and H0673: 1.	94-113, 17-33
540	HHFBP47	858073	550	517 - 945	1955	AR055: 7, AR089: 6, AR033: 5, AR096: 5, AR104: 4, AR060: 4, AR061: 4, AR039: 3, AR052: 3, AR053: 3 L0748: 2, L0749: 2, H0085: 1, H0050: 1, H0090: 1 and L0758: 1.	7-31, 56-73, 39-55
541	HKADE35	858104	551	66 - 593	1956	Thr-30 to Ala-35, Ala-72 to Trp-83, Thr-138 to Ala-151.	AR039: 8, AR089: 2, AR052: 2, AR061: 1, AR060: 1, AR096: 0, AR033: 0, AR104: 0 L0758: 9, L0748: 6, L0747: 6, L0779: 5, L0750: 4, H0556: 3, L0804: 3, H0658: 3, H0656: 2, L0770: 2, L0769: 2, L0774: 2, H0144: 2, H0648: 2, L0439: 2, L0749: 2, L0596: 2, H0265: 1, S0444: 1, H0318: 1, H0597: 1, H0050: 1,	95-130, 120-136

542	HCFAW88	858107	552	103 - 495	1957	Ser-122 to Trp-131.	H0024: 1, H0135: 1, H0090: 1, H0038: 1, H0616: 1, H0494: 1, L0065: 1, S0422: 1, H0529: 1, L0637: 1, L0764: 1, L0768: 1, L0794: 1, L0387: 1, L0803: 1, L0788: 1, L0790: 1, L0664: 1, L0438: 1, H0555: 1, L0780: 1, L0731: 1, H0444: 1, H0542: 1, H0543: 1 and H0423: 1.	67-88, 3-30, 34-52, 96-123
							AR033: 3, AR089: 2, AR053: 2, AR055: 2, AR060: 2, AR104: 1, AR061: 1, AR096: 1, AR039: 1, AR052: 0 L0731: 9, L0803: 8, H0436: 6, L0740: 6, L0756: 6, L0805: 5, L0754: 5, L0783: 4, L0747: 4, L0749: 4, L0777: 4, H0556: 3, H0013: 3, L0771: 3, L0794: 3, L0774: 3, L0775: 3, L0809: 3, L0665: 3, L0757: 3, L0759: 3, L0599: 3, H0422: 3, H0341: 2, L0005: 2, S0046: 2, H0586: 2, H0427: 2, S0280: 2, H0201: 2, H0553: 2, H0040: 2, H0551: 2, T0042: 2, L0770:	

2, L0769: 2, L0764: 2,
L0766: 2, L0790: 2, H0144:
2, L0438: 2, H0547: 2,
S0406: 2, L0439: 2, L0751:
2, L0750: 2, L0779: 2,
L0752: 2, L0581: 2, H0543:
2, H0685: 1, S0040: 1,
L0002: 1, S0418: 1, S0354:
1, S0358: 1, S0376: 1,
S0045: 1, S0222: 1, H0333:
1, H0331: 1, H0492: 1,
S0010: 1, H0052: 1, T0110:
1, H0327: 1, H0530: 1,
H0545: 1, L0471: 1, H0620:
1, H0015: 1, H0373: 1,
S0003: 1, S0214: 1, H0428:
1, H0039: 1, H0316: 1,
H0591: 1, H0264: 1, S0112:
1, H0494: 1, H0560: 1,
L0065: 1, H0509: 1, H0646:
1, S0144: 1, S0422: 1,
H0529: 1, H0026: 1, L0372:
1, L0641: 1, L0643: 1,
L0662: 1, L0768: 1, L0804:
1, L0776: 1, L0655: 1,
L0659: 1, L0791: 1, L0663:
1, H0435: 1, H0539: 1,
S0152: 1, H0522: 1, H0696:
1, L0748: 1, L0758: 1,
H0343: 1, S0436: 1, L0589: